

FIG. 1

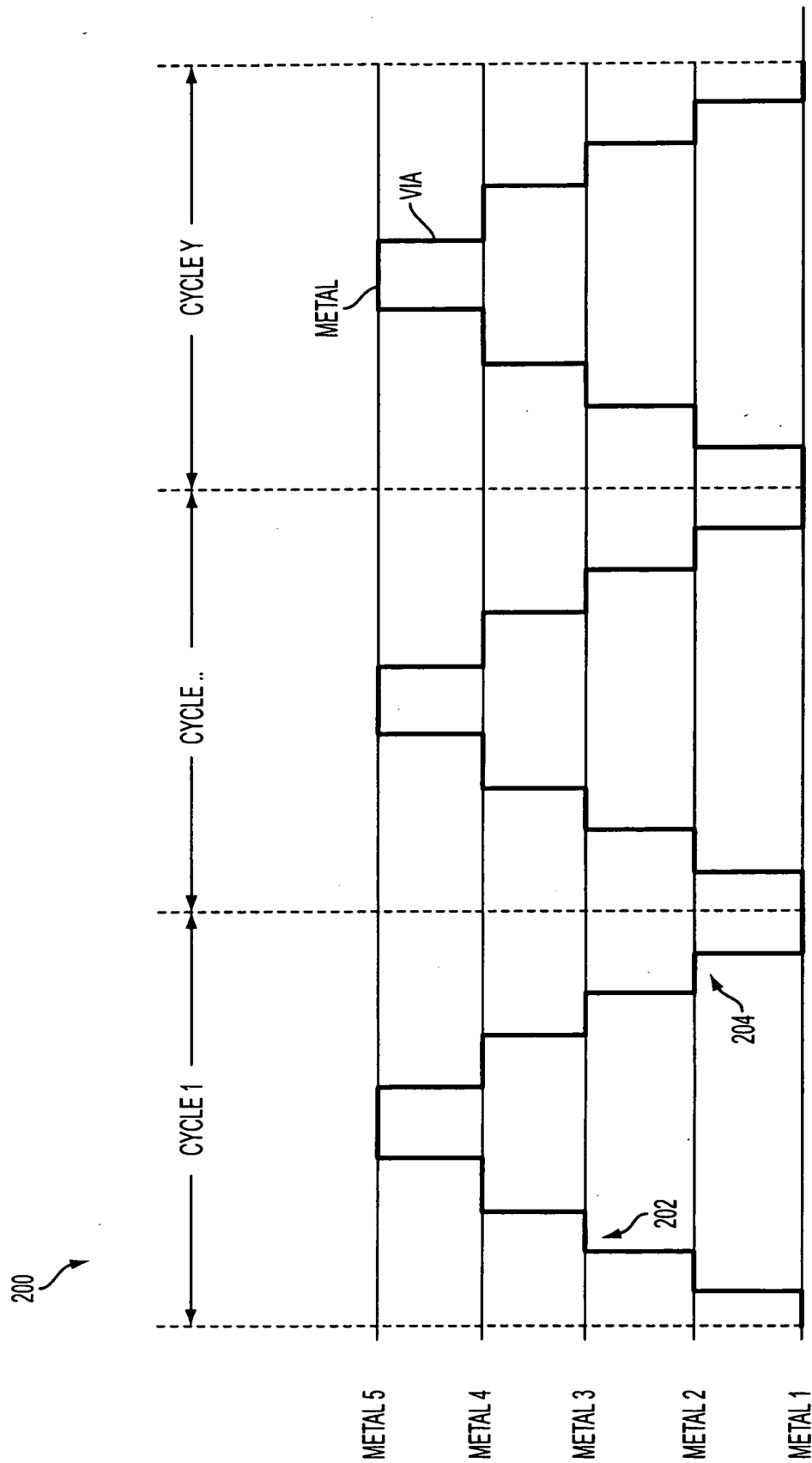


FIG. 2

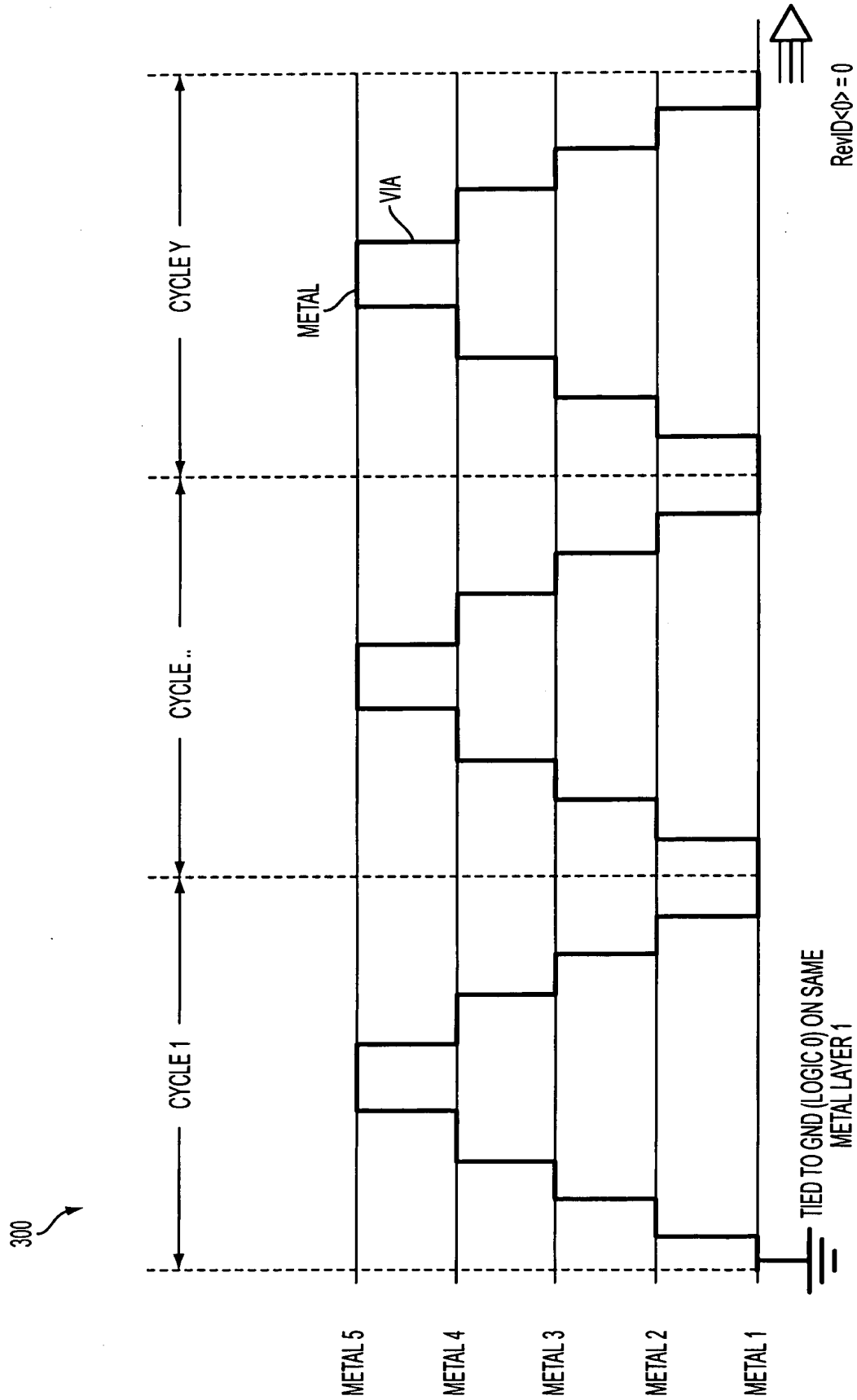


FIG. 3A

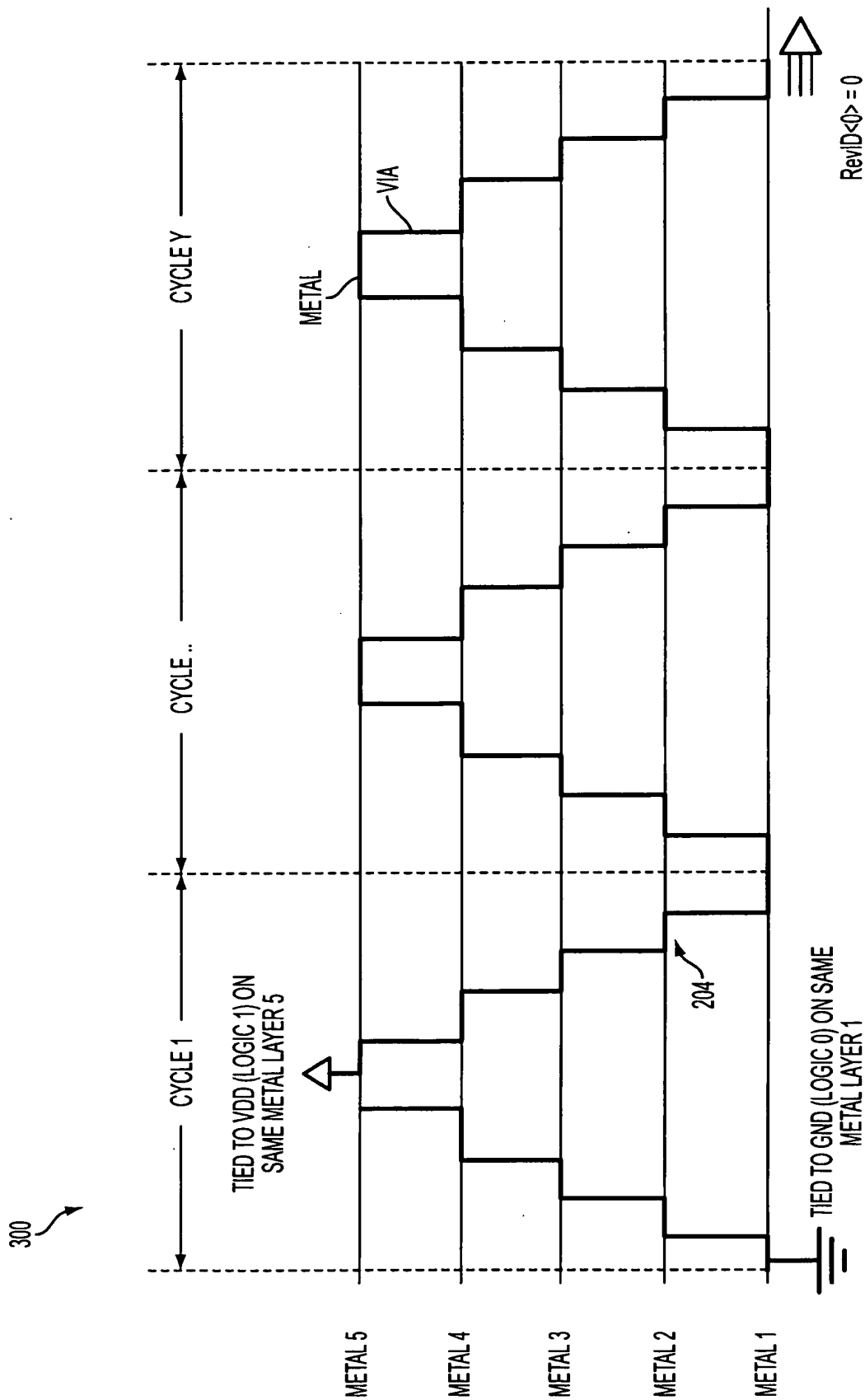


FIG. 3B

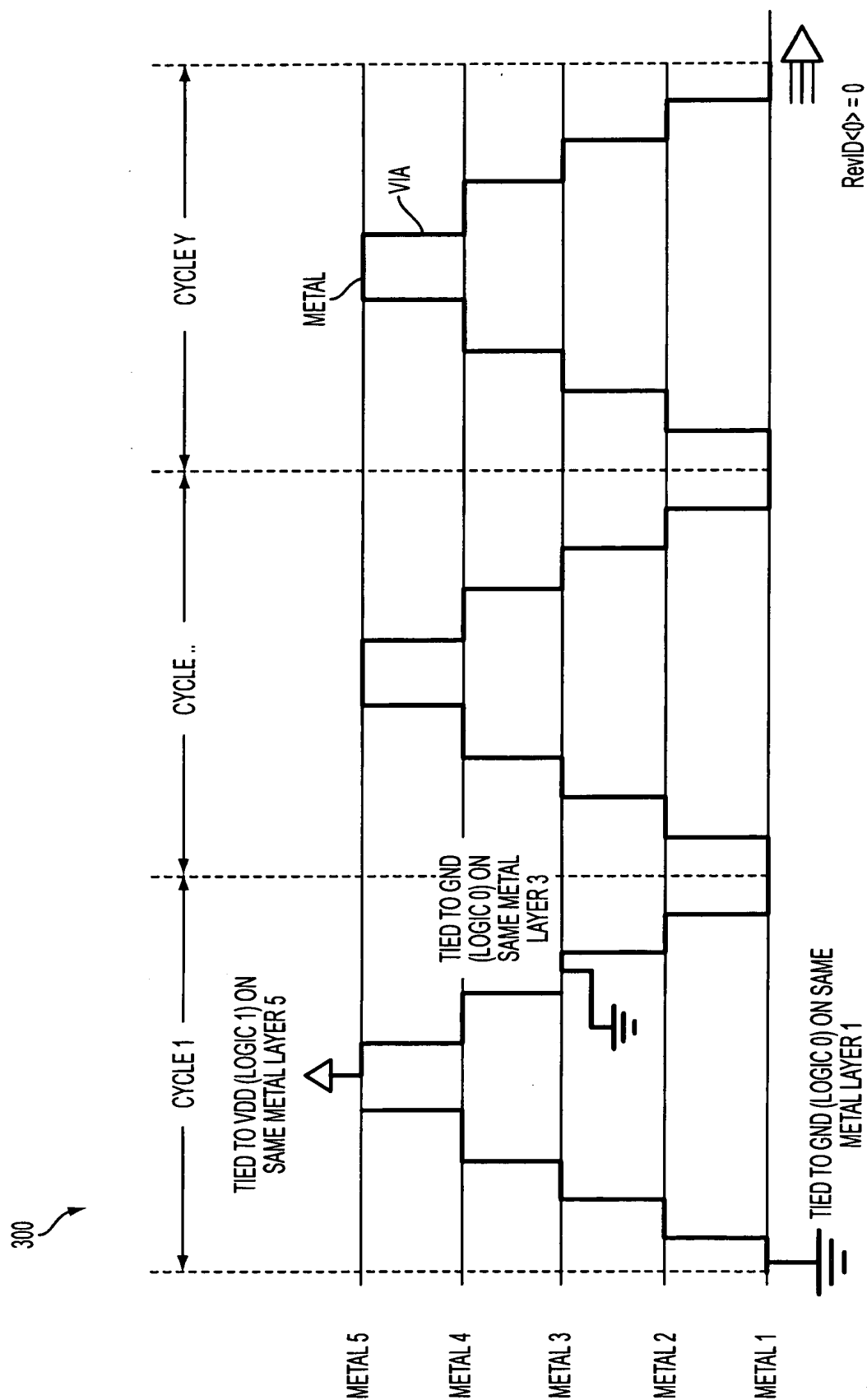


FIG. 3C

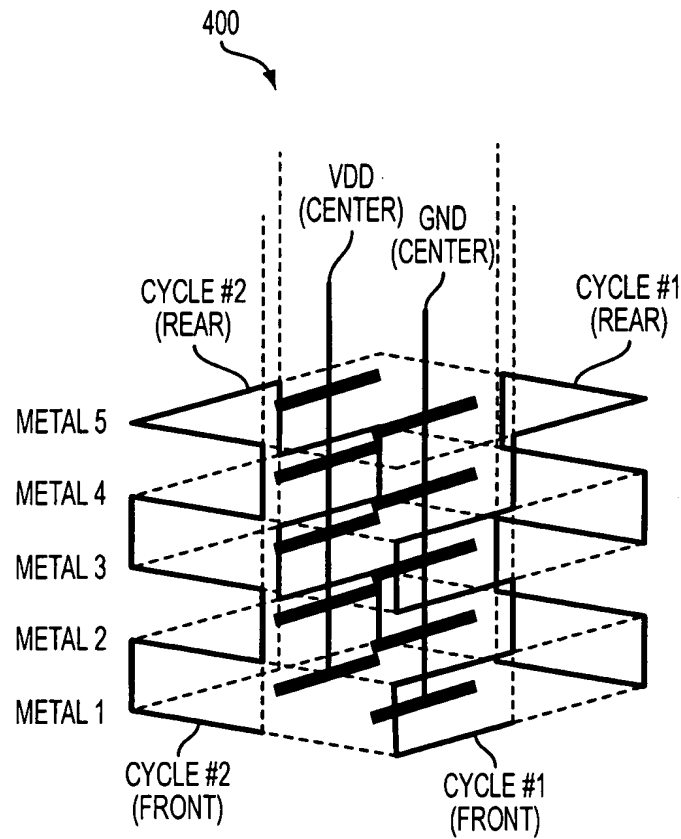


FIG. 4

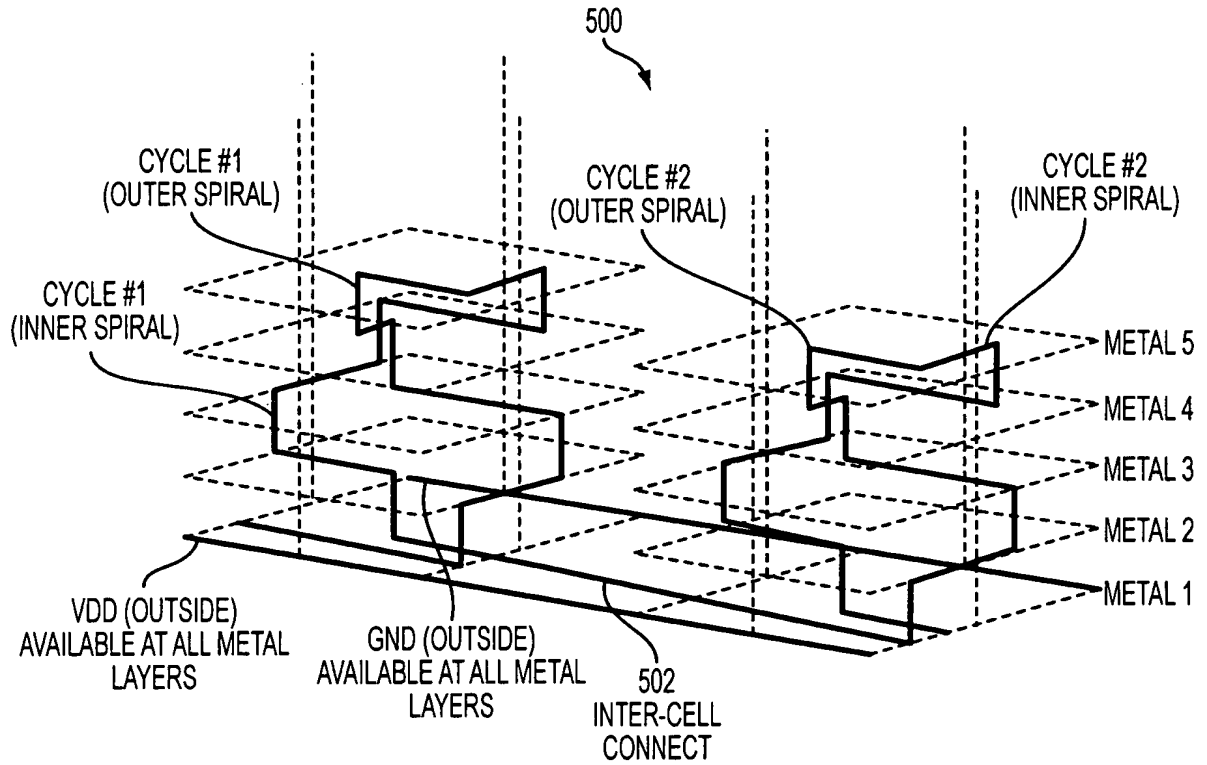


FIG. 5A

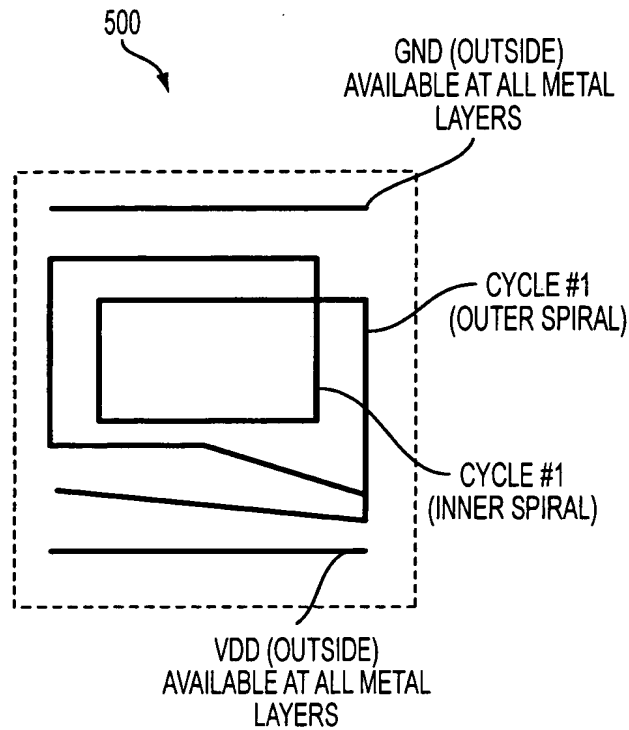


FIG. 5B

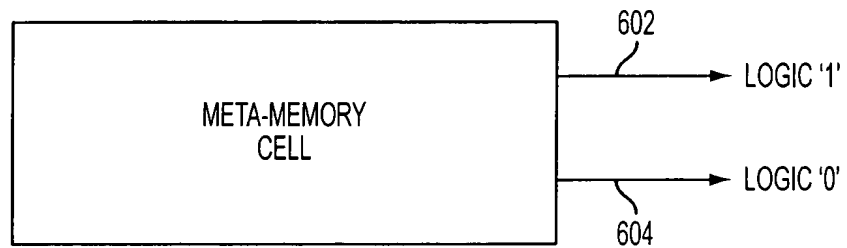


FIG. 6

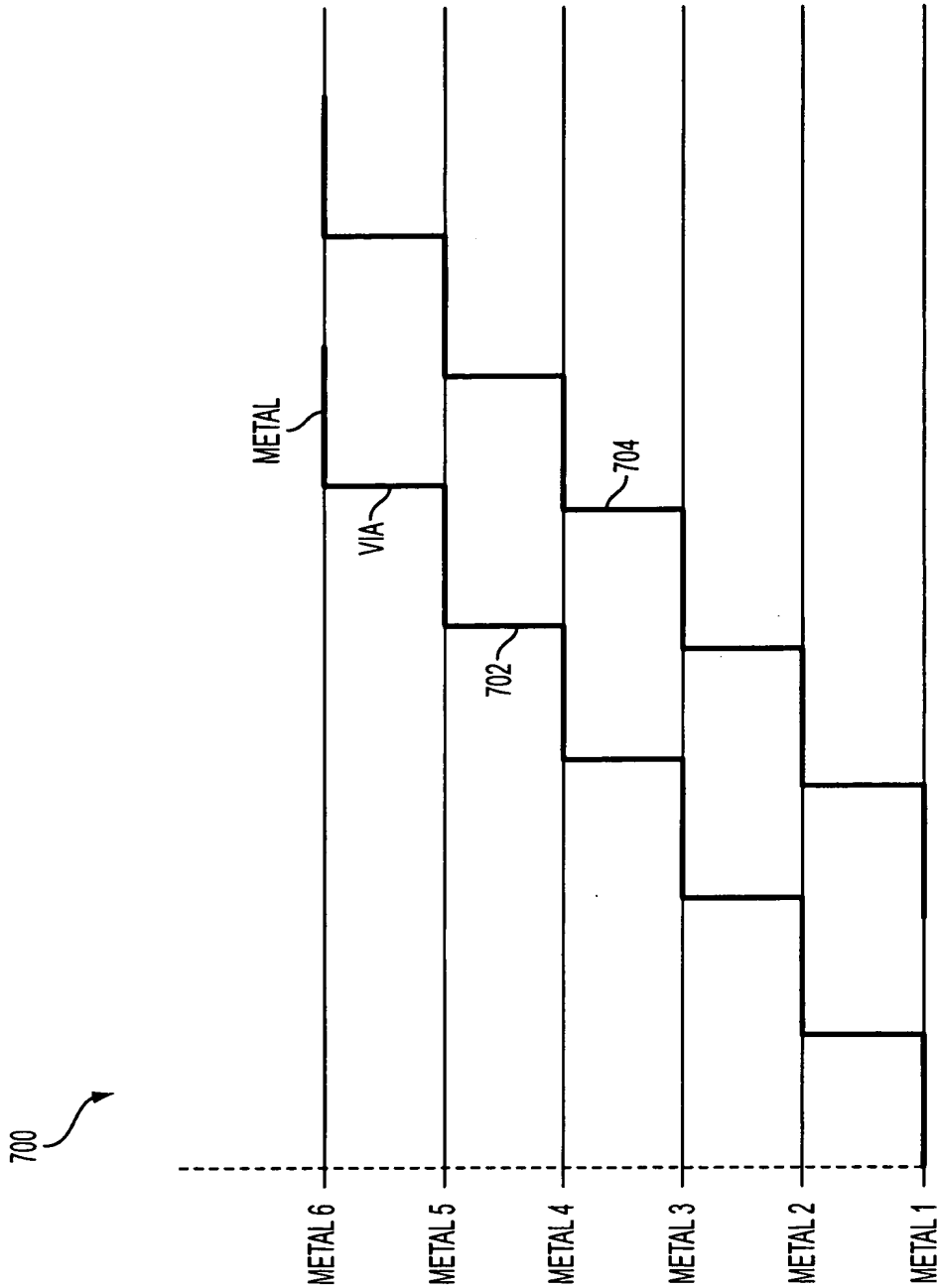


FIG. 7A

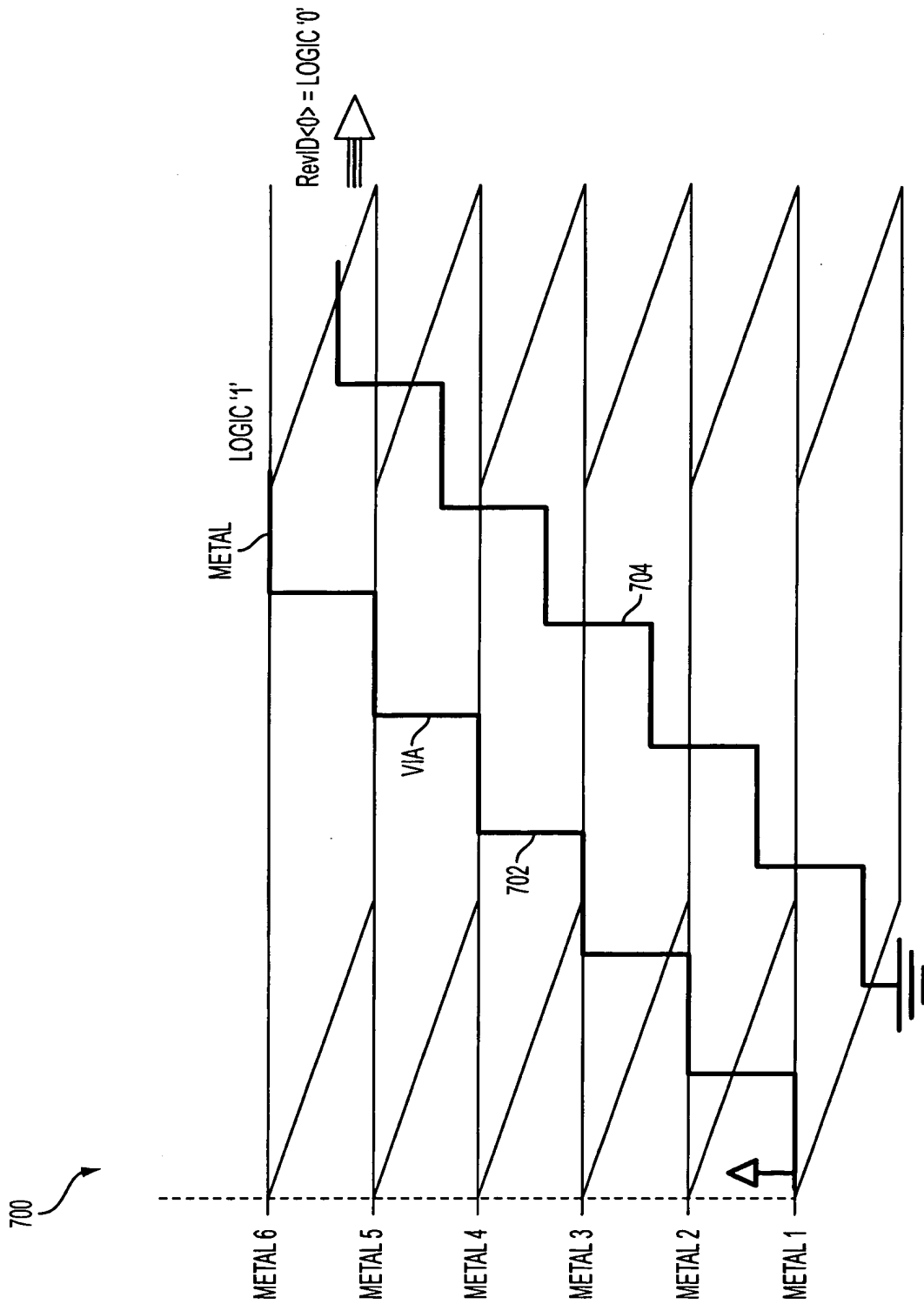


FIG. 7B

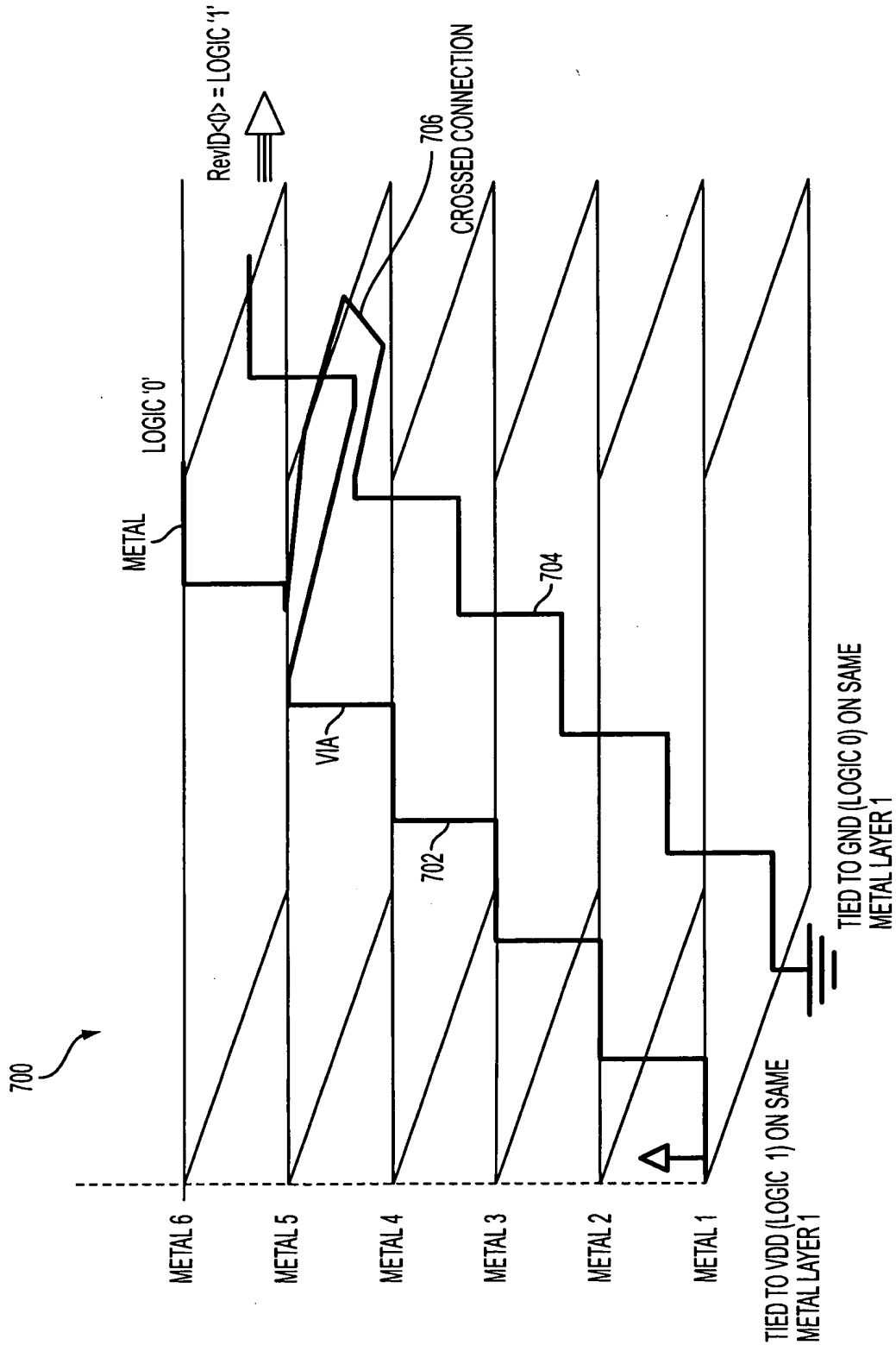


FIG. 7C

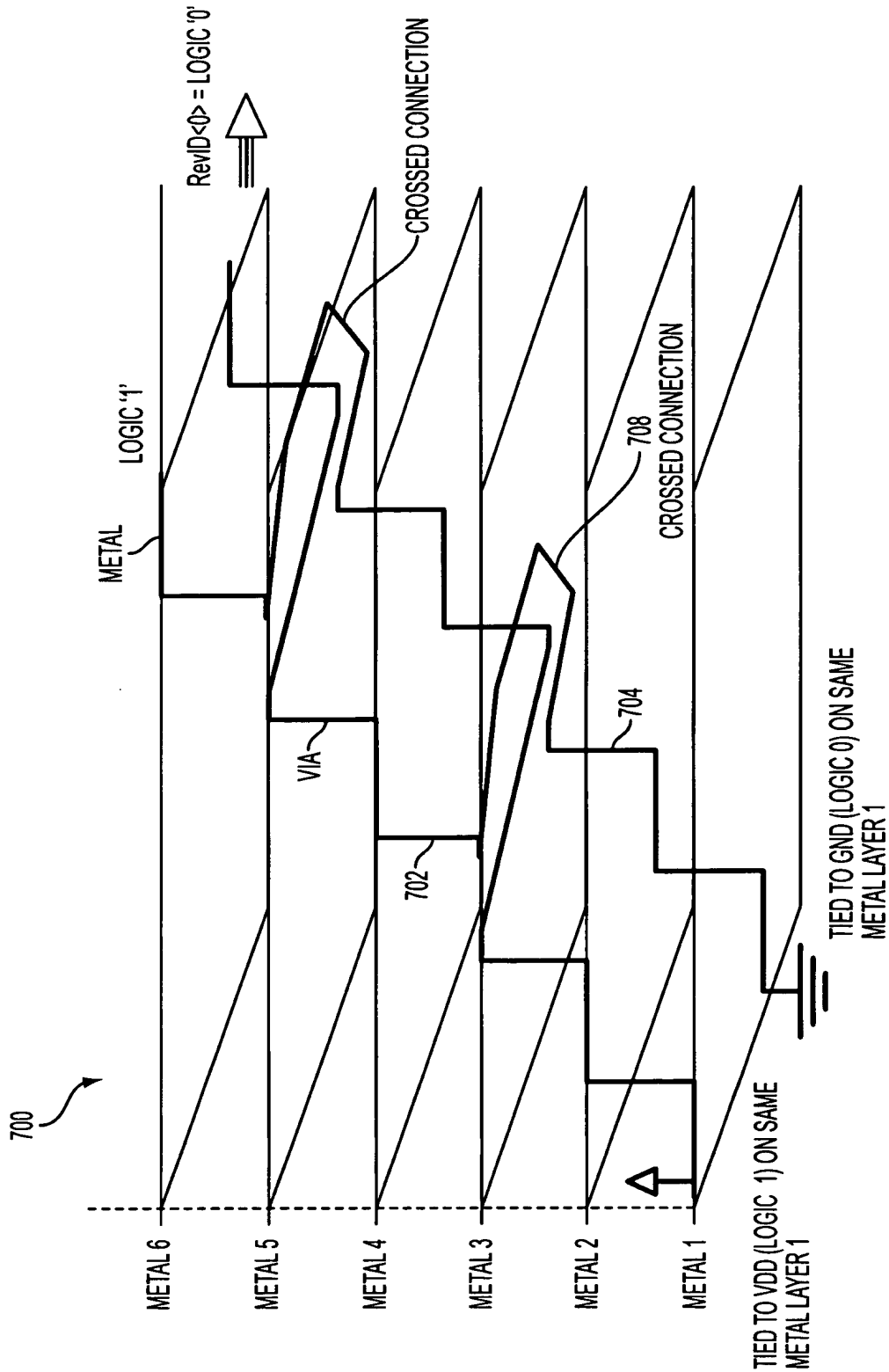


FIG. 7D

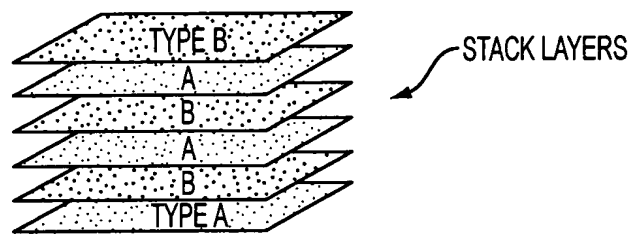


FIG. 8A

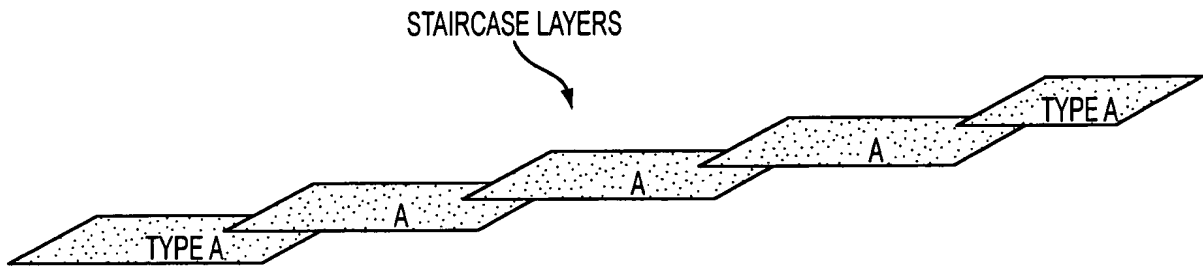


FIG. 8B

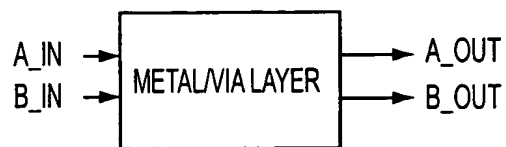


FIG. 9A

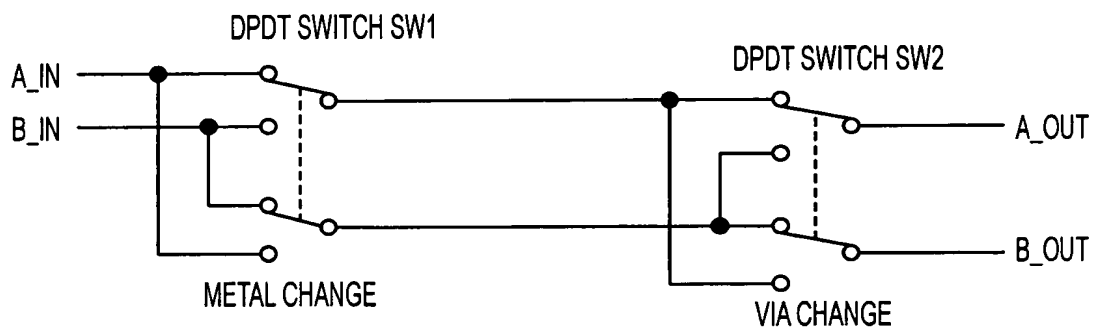


FIG. 9B

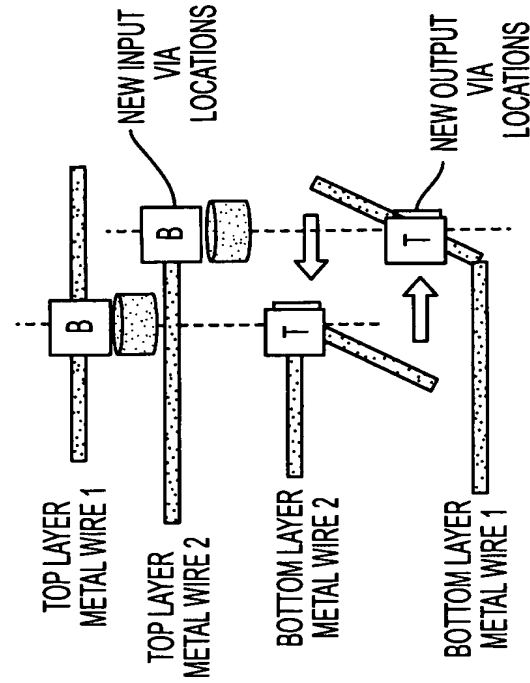


FIG. 9D

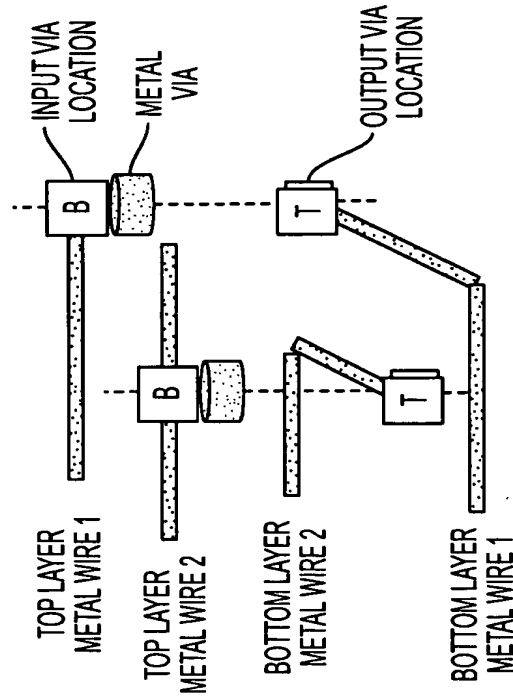


FIG. 9C

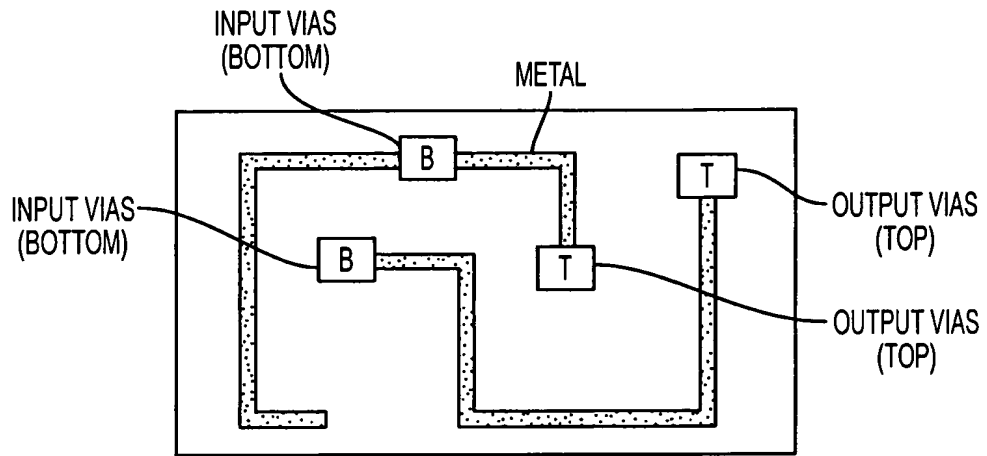


FIG. 10A

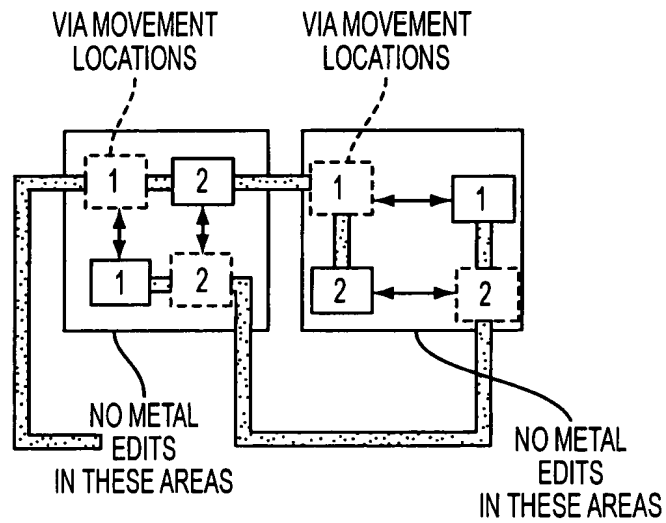
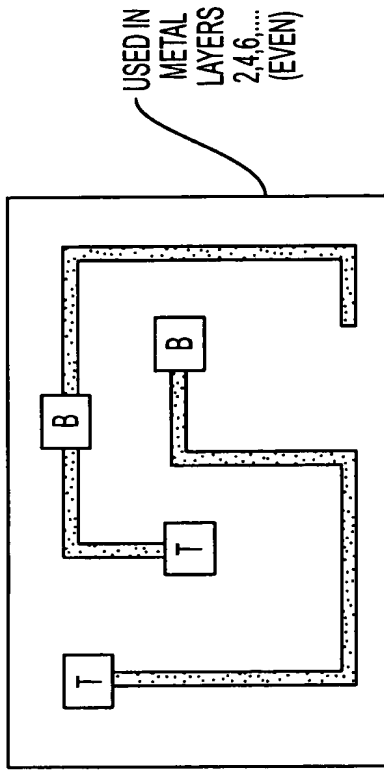


FIG. 10B



FLIP BASIC PATTERN

TO FIG. 11D

FIG. 11C

FROM FIG. 11C

FLIP BASIC PATTERN W/METAL CHANGE
(2 CUTS, 2 JUMPS)

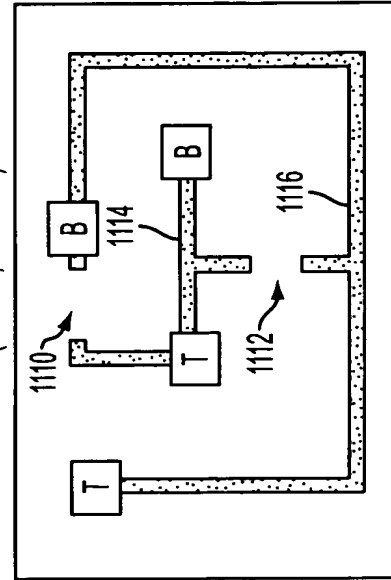
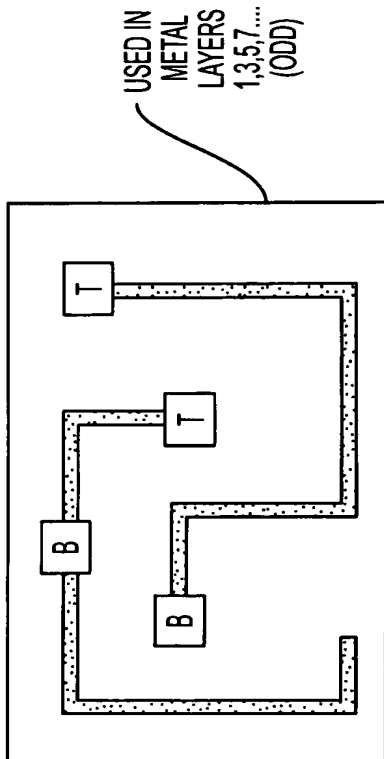


FIG. 11D



BASIC PATTERN

TO FIG. 11B

FIG. 11A

FROM FIG. 11A

BASIC PATTERN W/METAL CHANGE
(2 CUTS, 2 JUMPS)

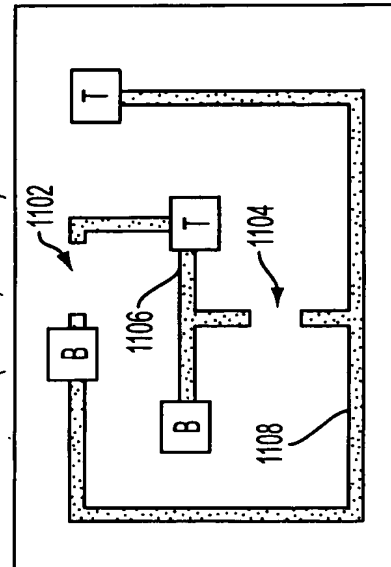
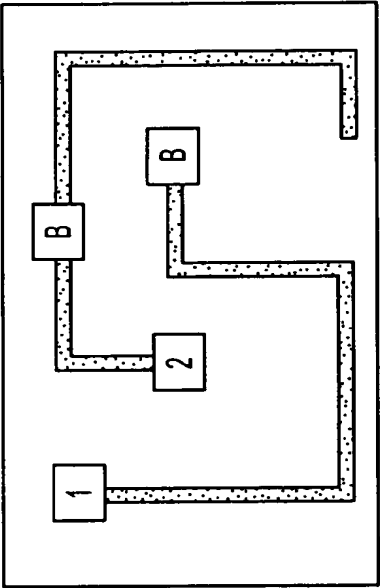


FIG. 11B



FLIP BASIC PATTERN

TO FIG. 12D

FIG. 12C

FROM FIG. 12C

FLIP BASIC PATTERN W/VIA CHANGE
(2 DISCONNECTS, 2 CONNECTS)

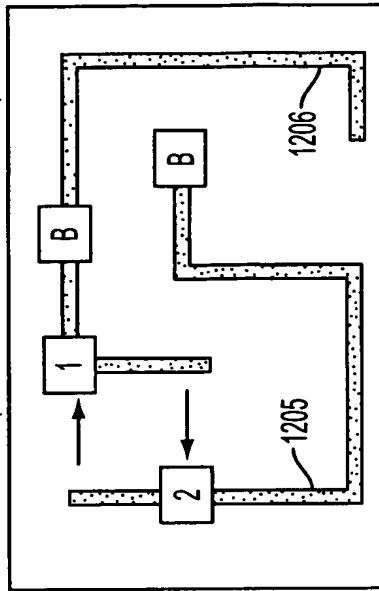
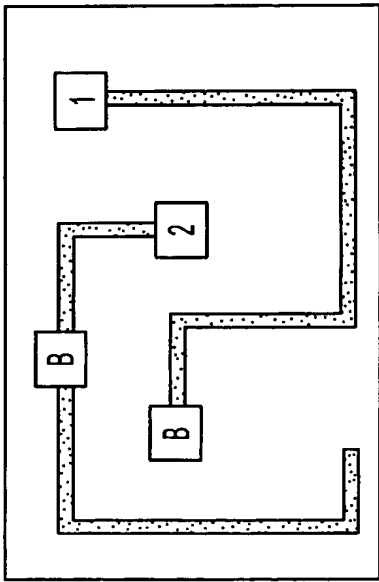


FIG. 12D



BASIC PATTERN

TO FIG. 12B

FIG. 12A

FROM FIG. 12A

BASIC PATTERN W/VIA CHANGE
(2 DISCONNECTS, 2 CONNECTS)

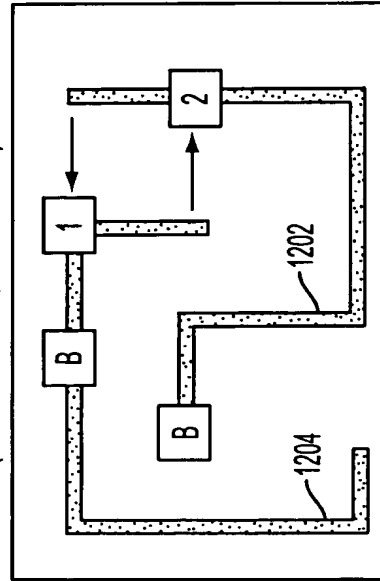
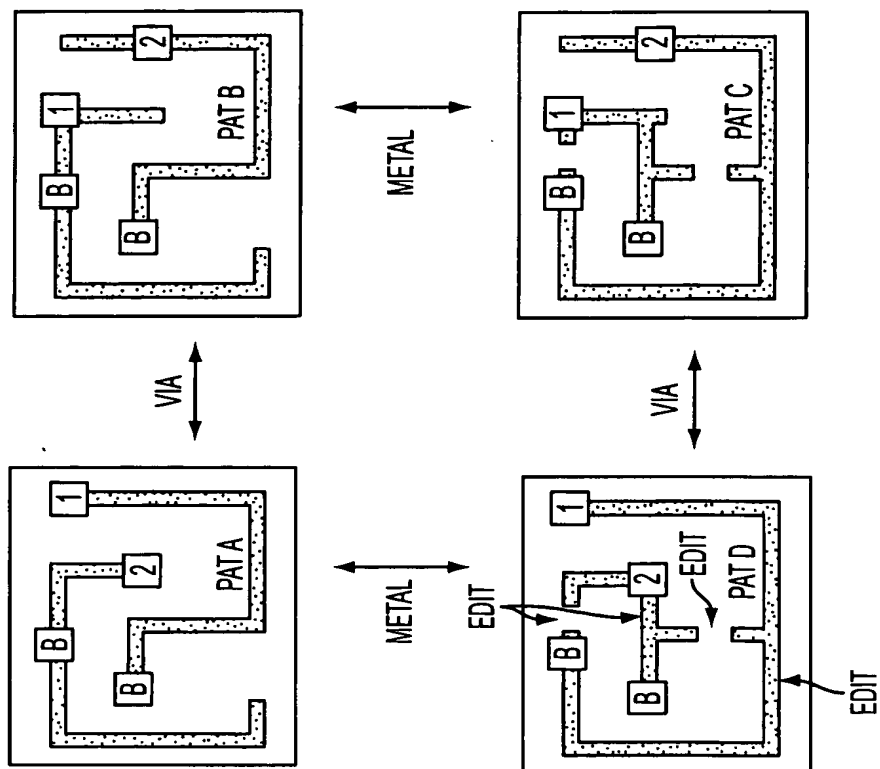
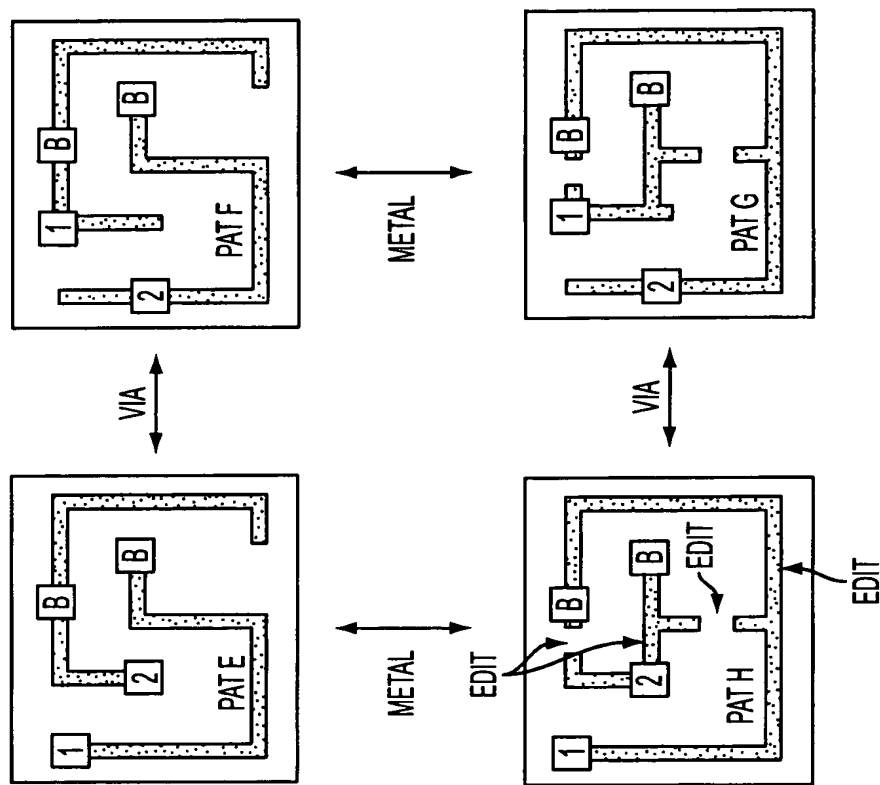


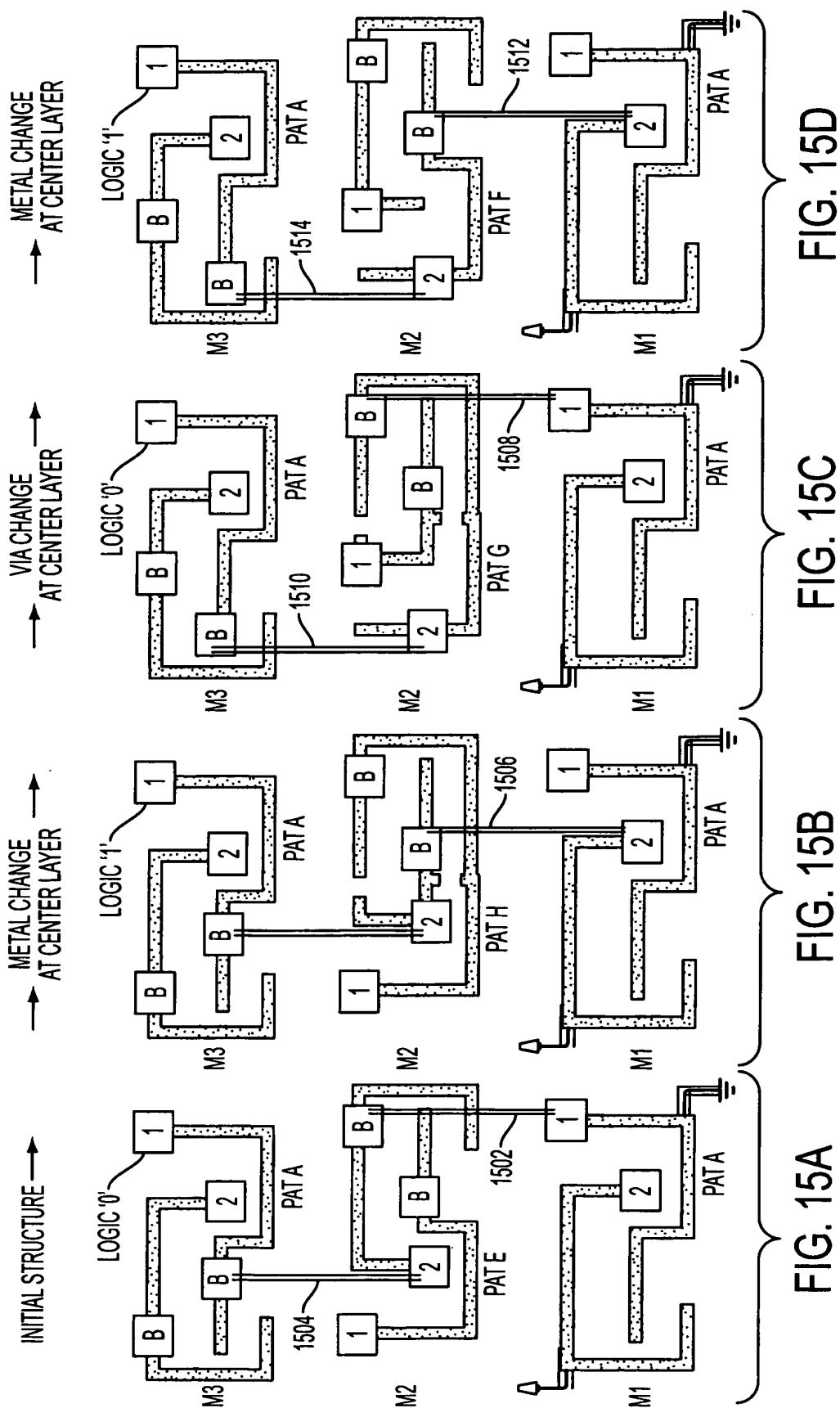
FIG. 12B

BASIC PATTERN



FLIP BASIC PATTERN





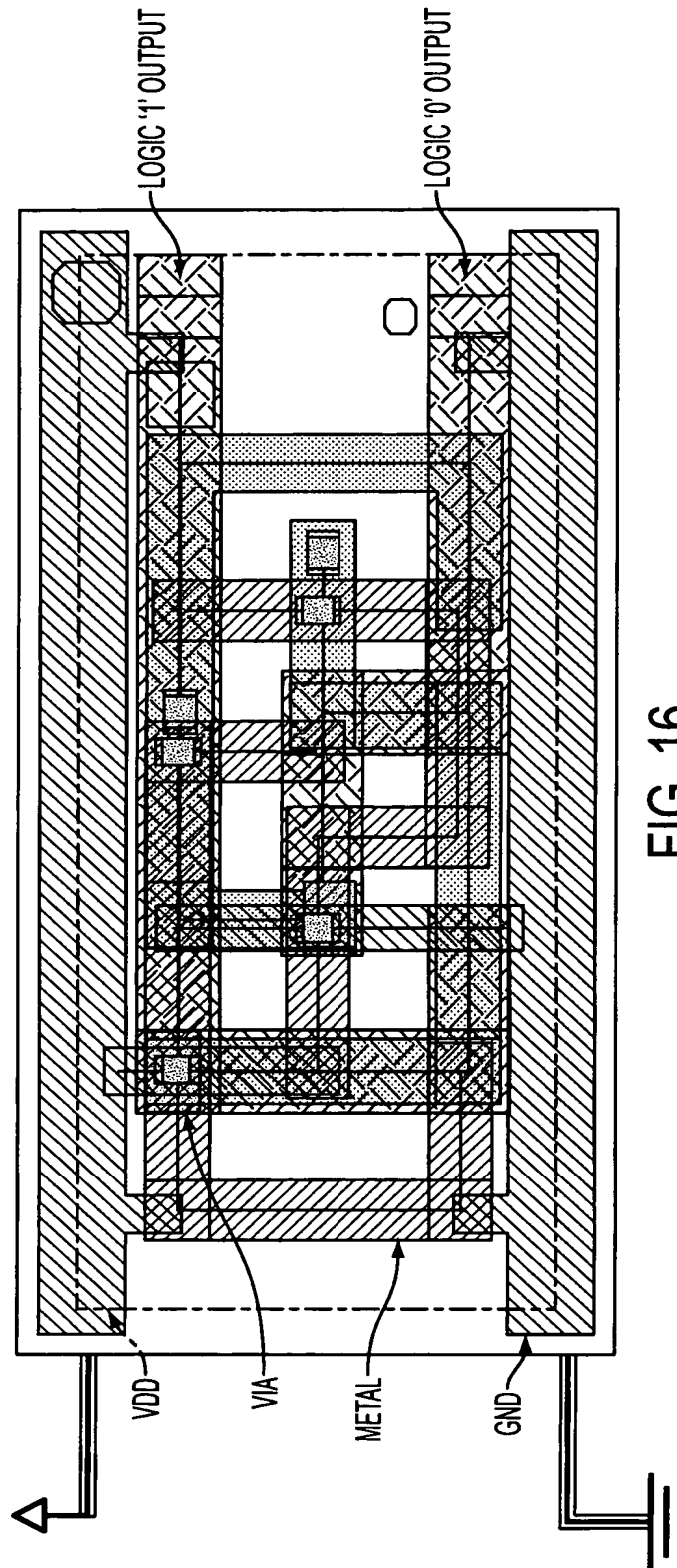


FIG. 16

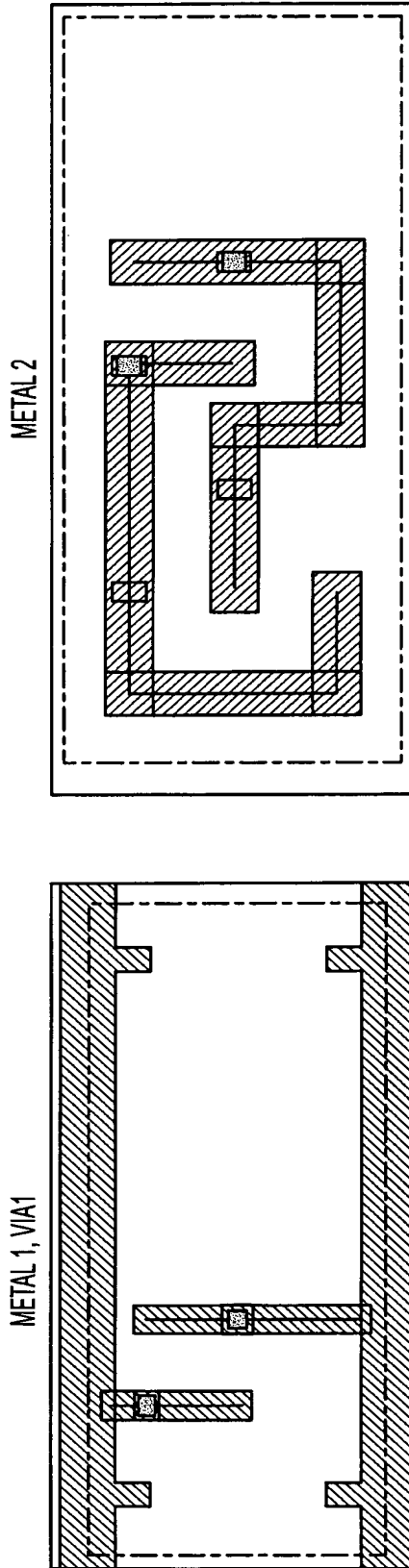


FIG. 17B

FIG. 17A

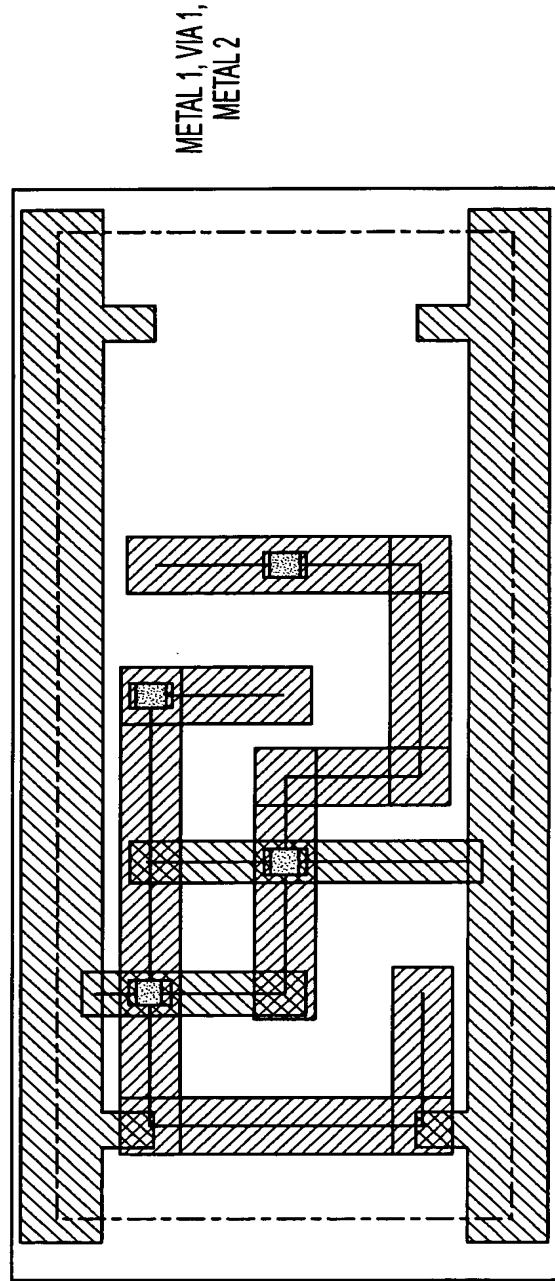


FIG. 17C

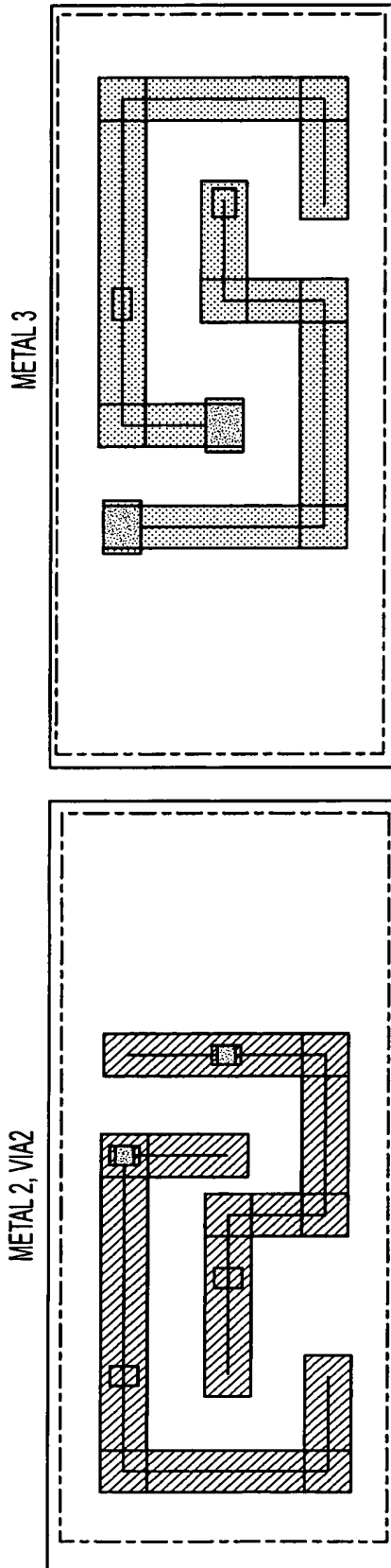


FIG. 18B

FIG. 18A

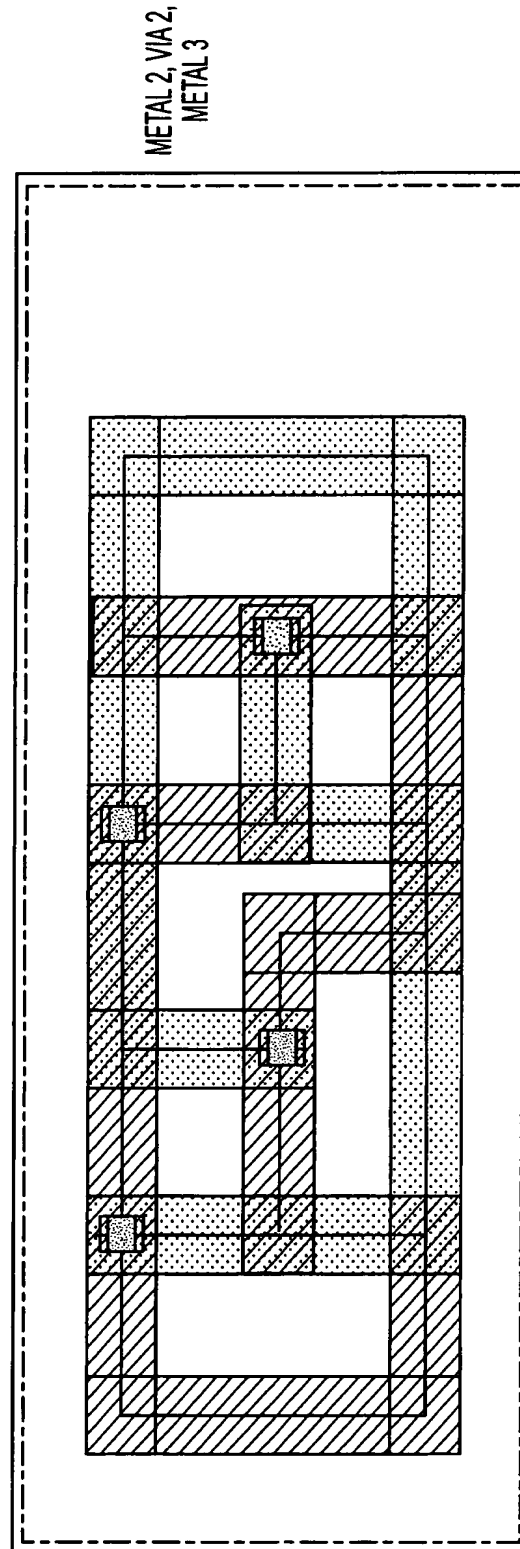


FIG. 18C

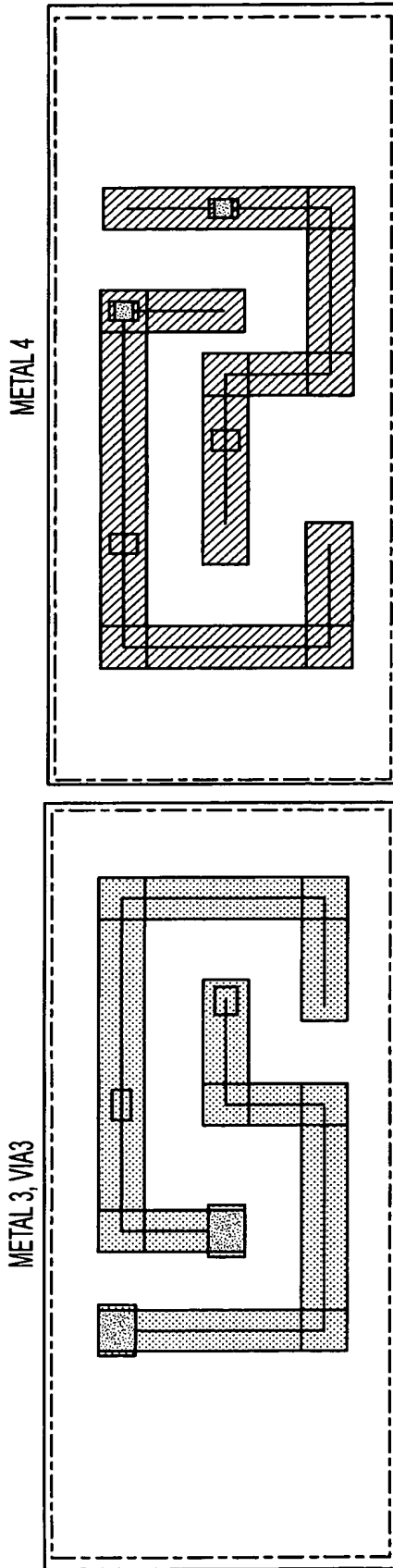


FIG. 19B

FIG. 19A

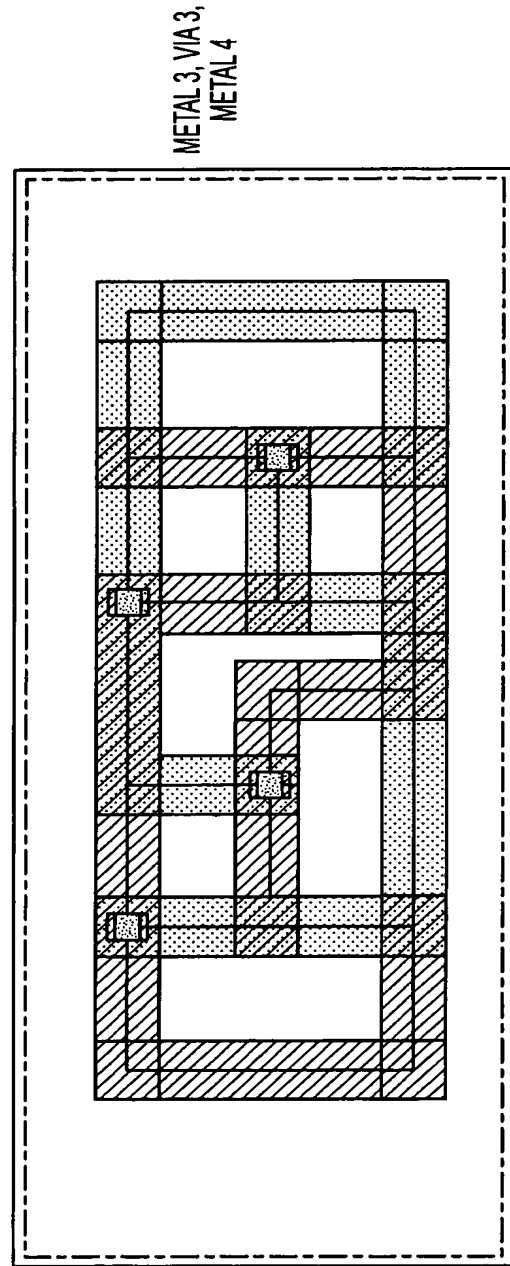


FIG. 19C

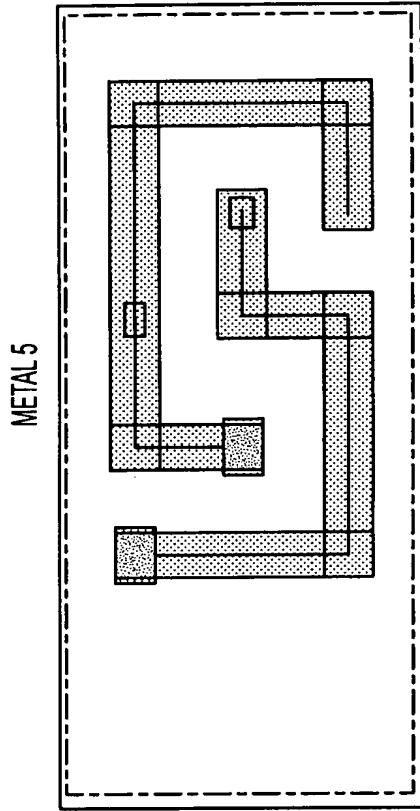


FIG. 20B

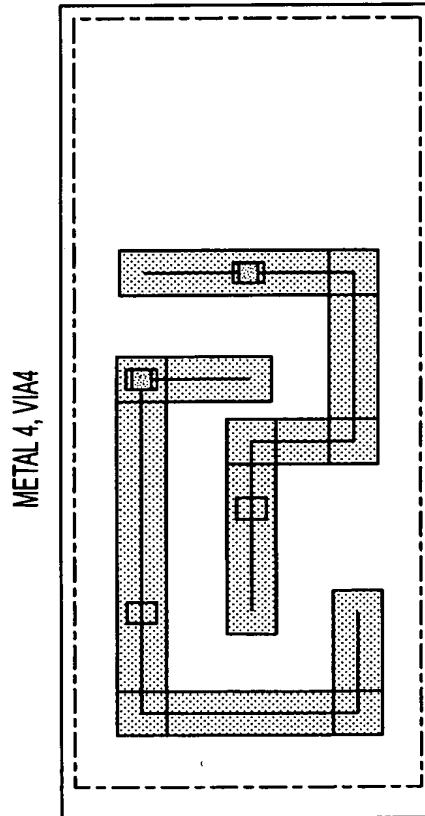


FIG. 20A

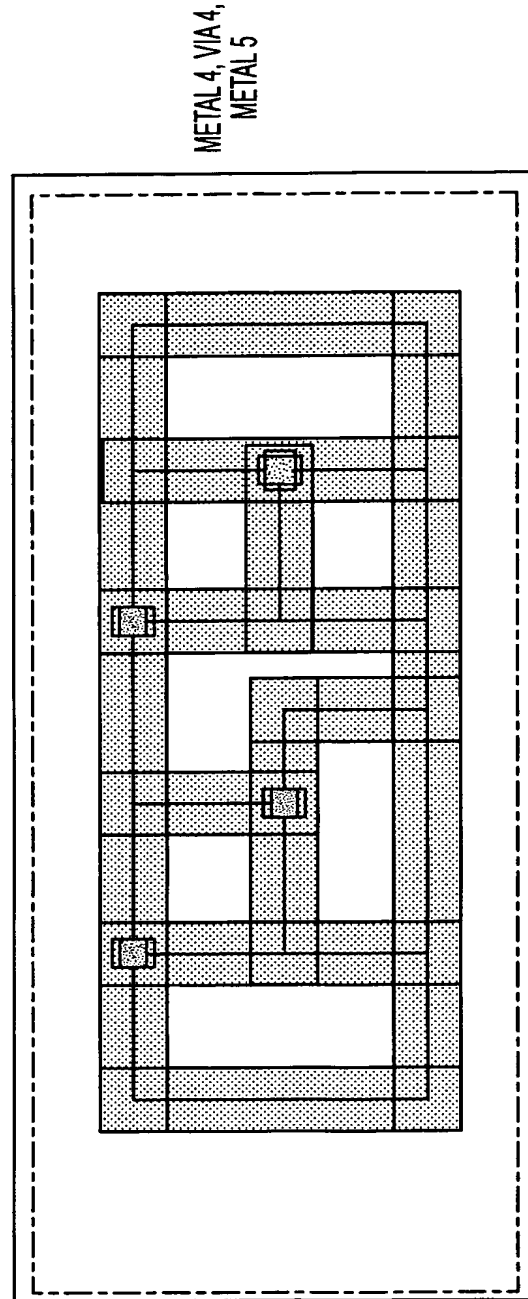


FIG. 20C

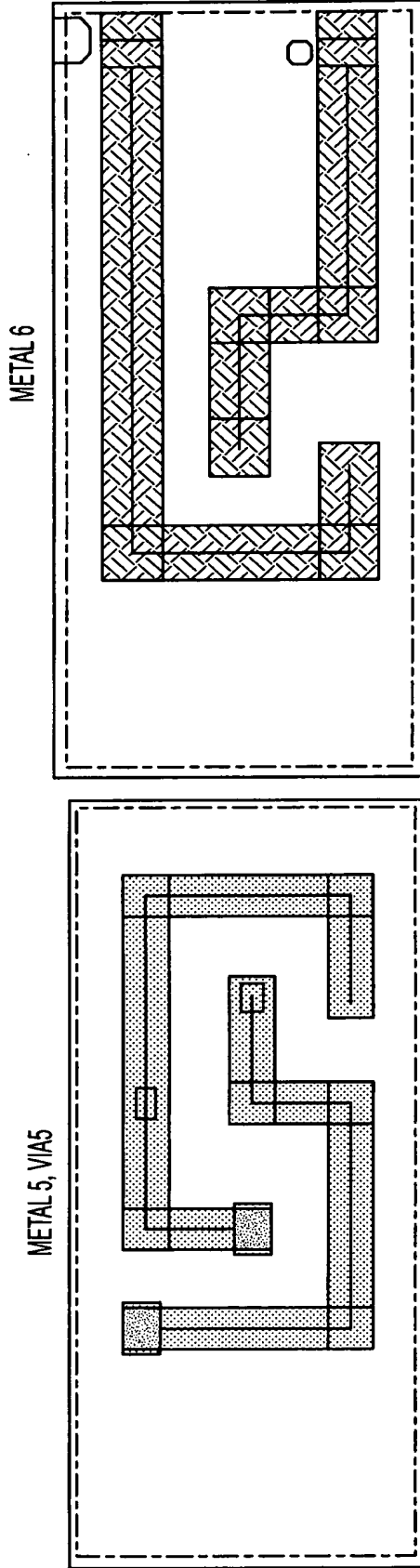


FIG. 21B

FIG. 21A

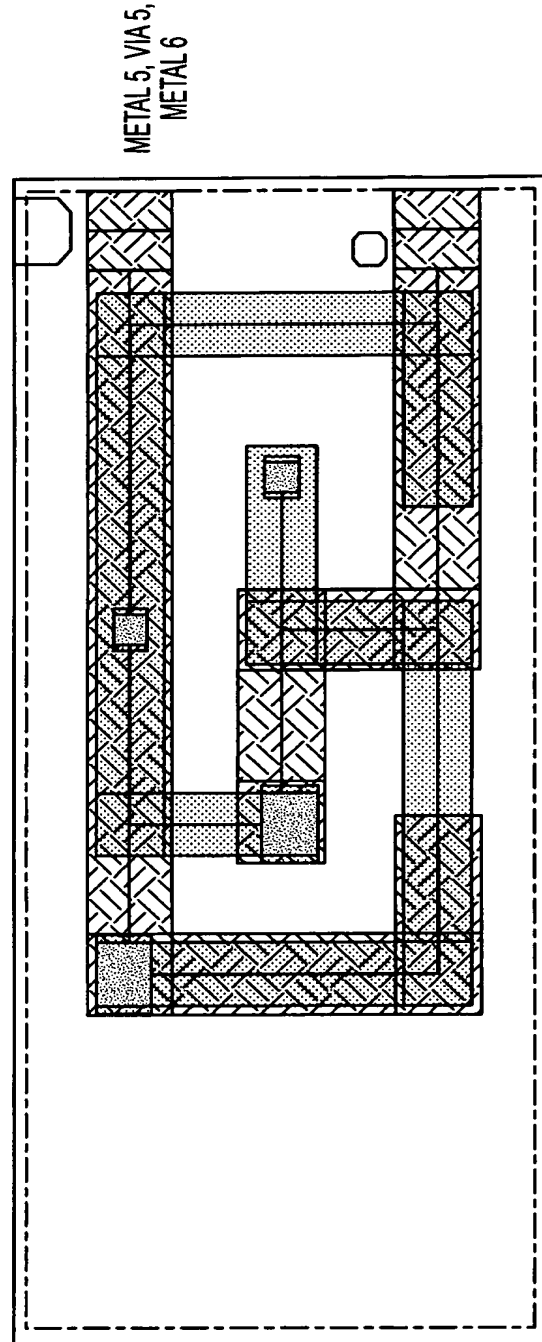


FIG. 21C

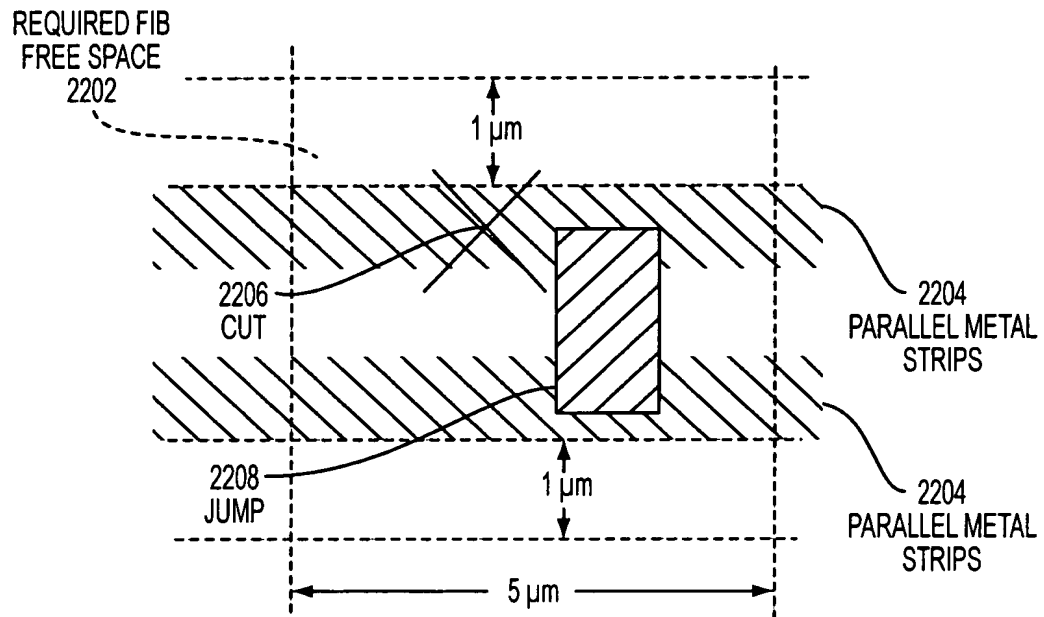


FIG. 22

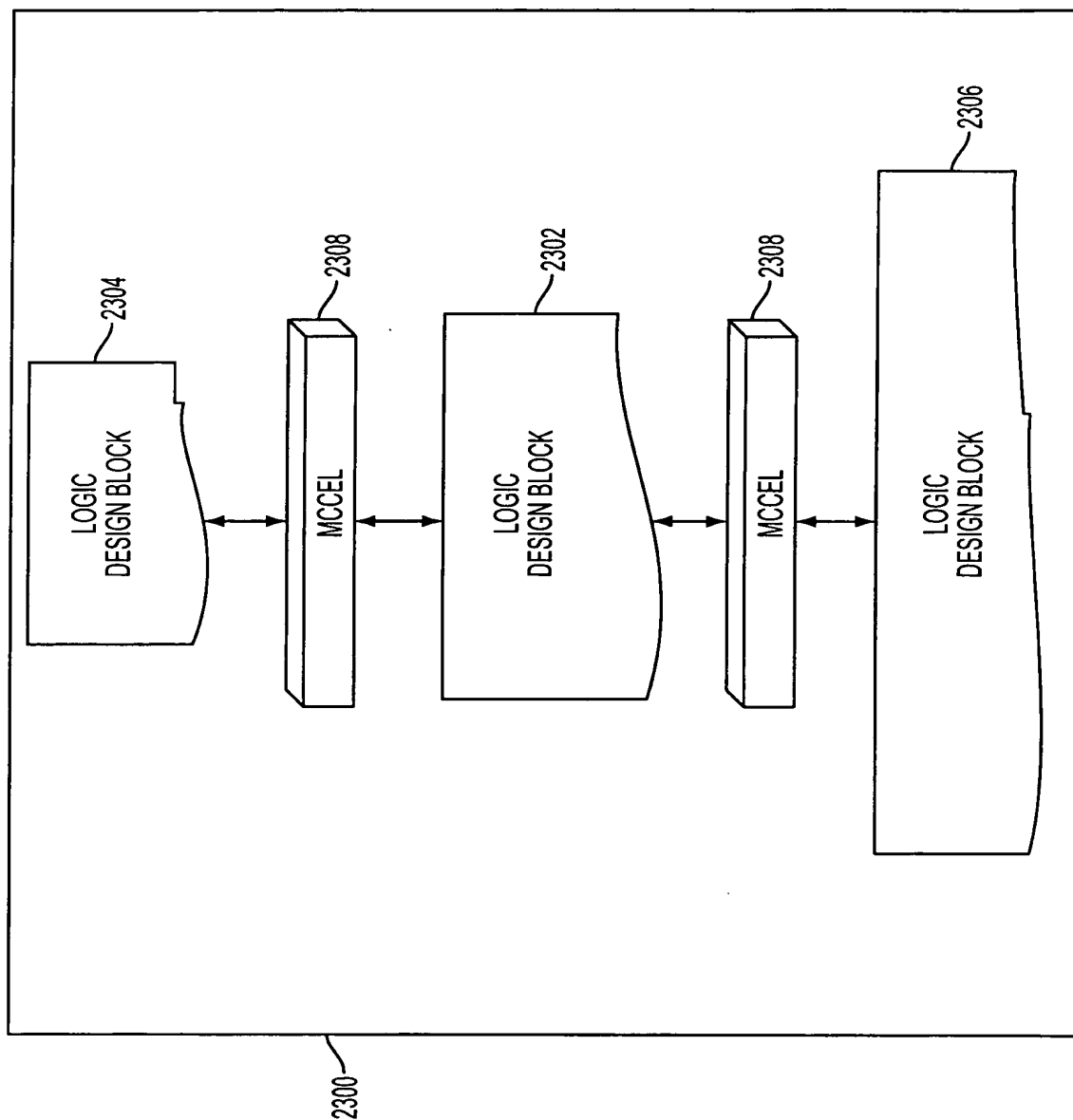


FIG. 23

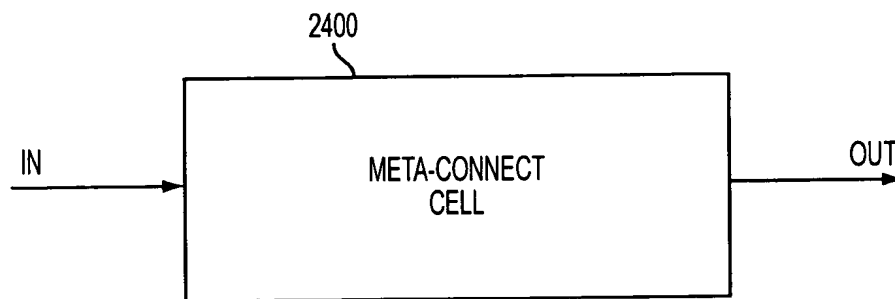


FIG. 24A

OUT	COMMENT
IN	DEFAULT CONNECT AT ANY LAYER
0	TIED TO GND AT ANY LAYER
1	TIED TO VDD AT ANY LAYER

FIG. 24B

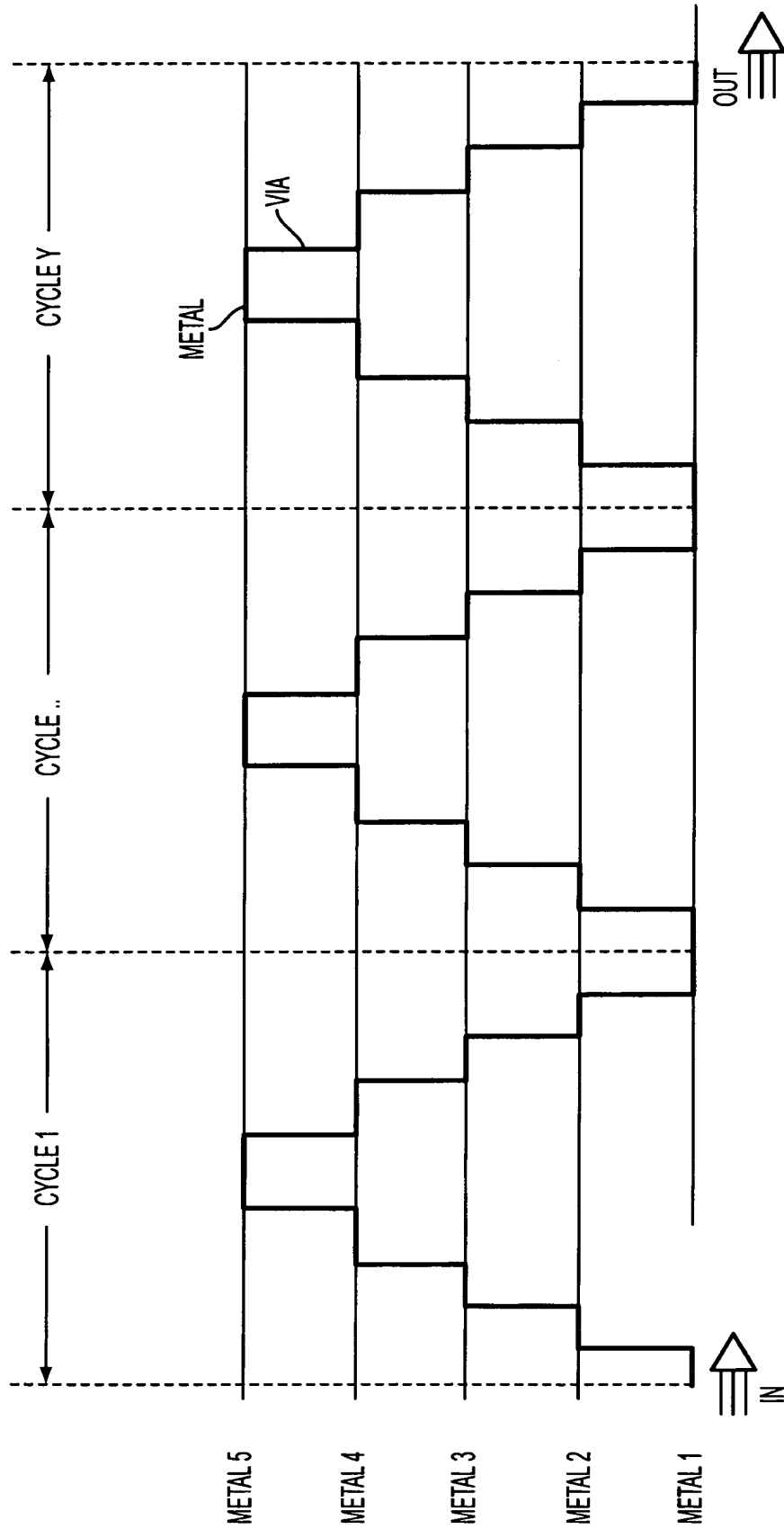


FIG. 25

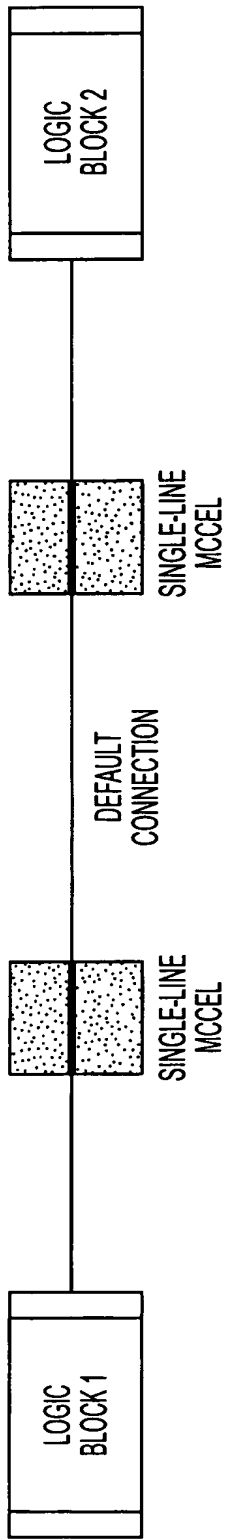


FIG. 26A

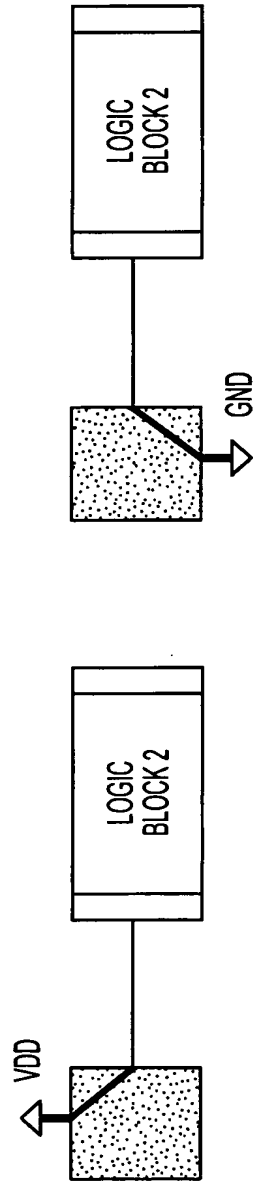


FIG. 26B

FIG. 26C

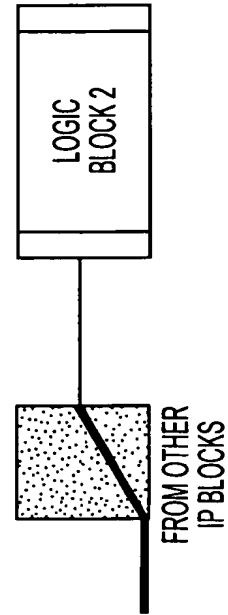


FIG. 26D

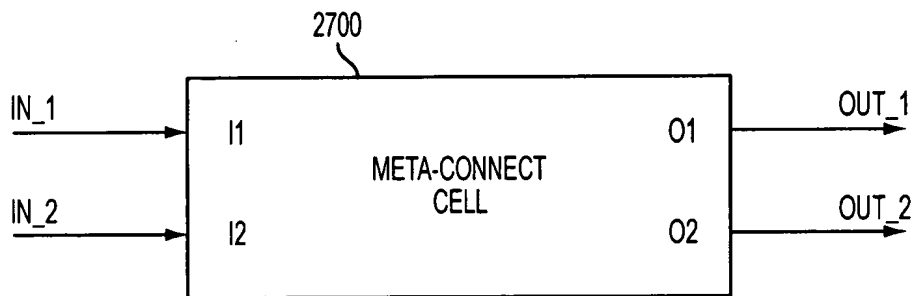


FIG. 27A

TOGGLE	OUT_1	OUT_2	COMMENT
0	IN_1	IN_2	DEFAULT
1	IN_2	IN_1	METAL/VIA CHANGE

FIG. 27B

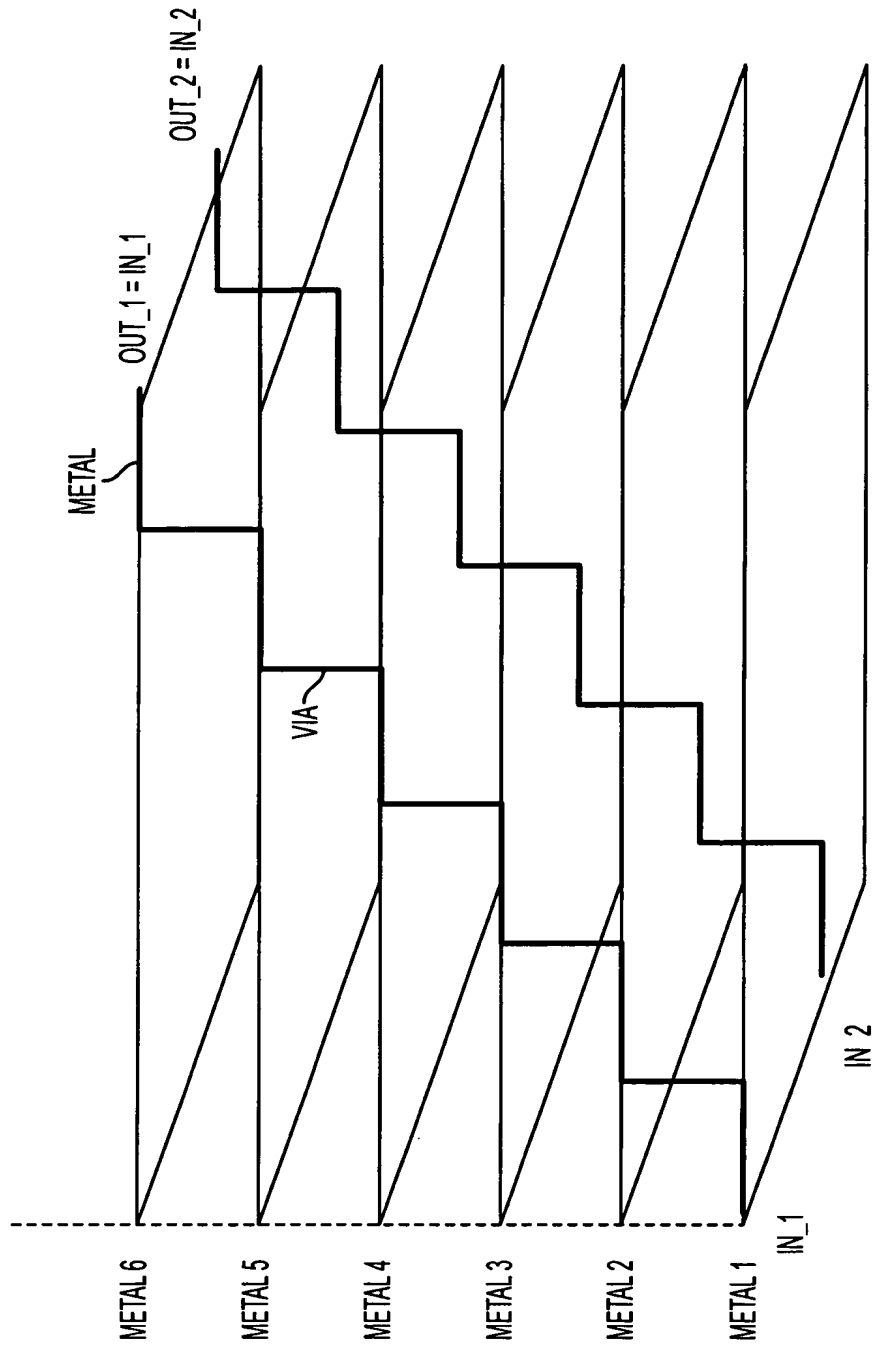


FIG. 28

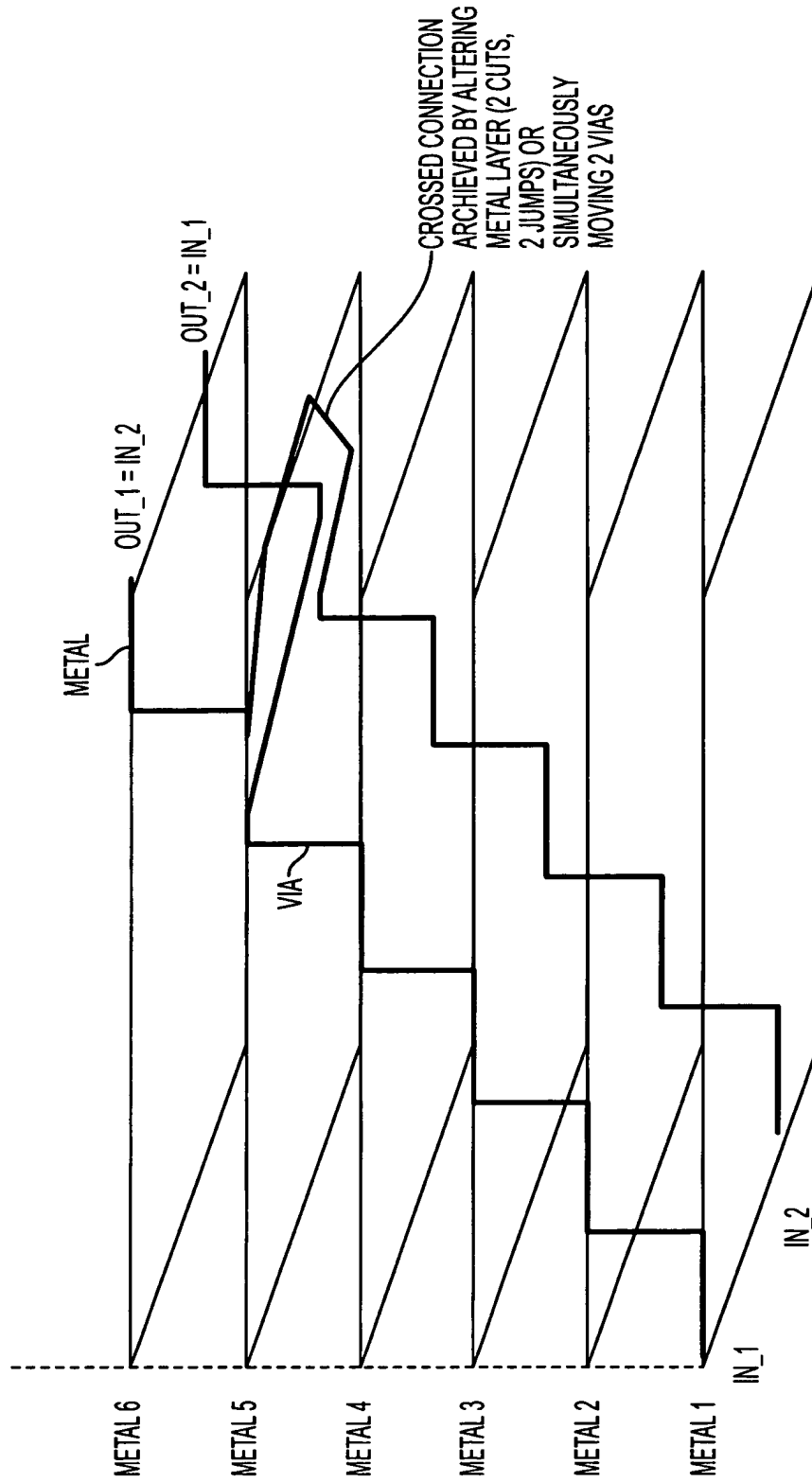


FIG. 29

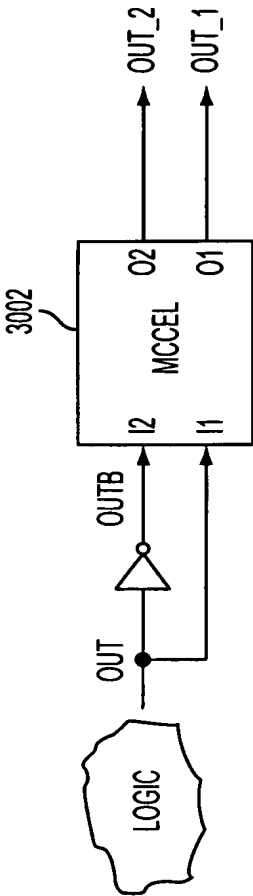


FIG. 30A

OUT_1	OUT_2	COMMENT
OUTB	OUT	DEFAULT
	OUT	METAL/VIA CHANGE

FIG. 30B

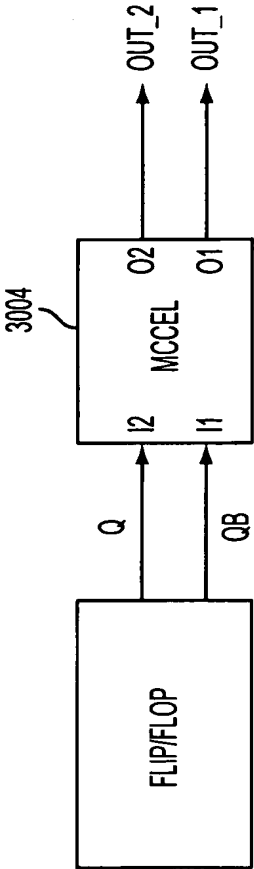


FIG. 30C

OUT_1	OUT_2	COMMENT
Q	QB	DEFAULT
QB	Q	METAL/VIA CHANGE

FIG. 30D

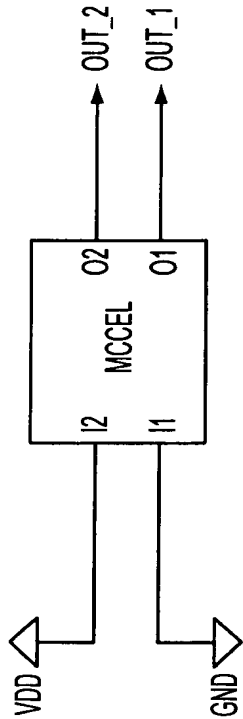


FIG. 31A

OUT_1	OUT_2	COMMENT
0	1	DEFAULT
1	0	METAL/VIA CHANGE

FIG. 31B

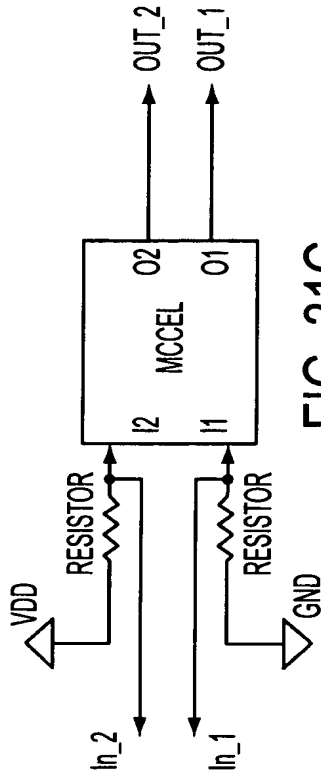


FIG. 31C

OUT_1	OUT_2	COMMENT
WEAK '0'	WEAK '1'	DEFAULT (In_1 & In_2 FLOATING)
WEAK '1'	WEAK '0'	METAL/VIA CHANGE (In_1 & In_2 FLOATING)
In_1	In_2	DEFAULT (In_1 & In_2 DRIVEN)
In_2	In_1	METAL/VIA CHANGE (In_1 & In_2 DRIVEN)

FIG. 31D

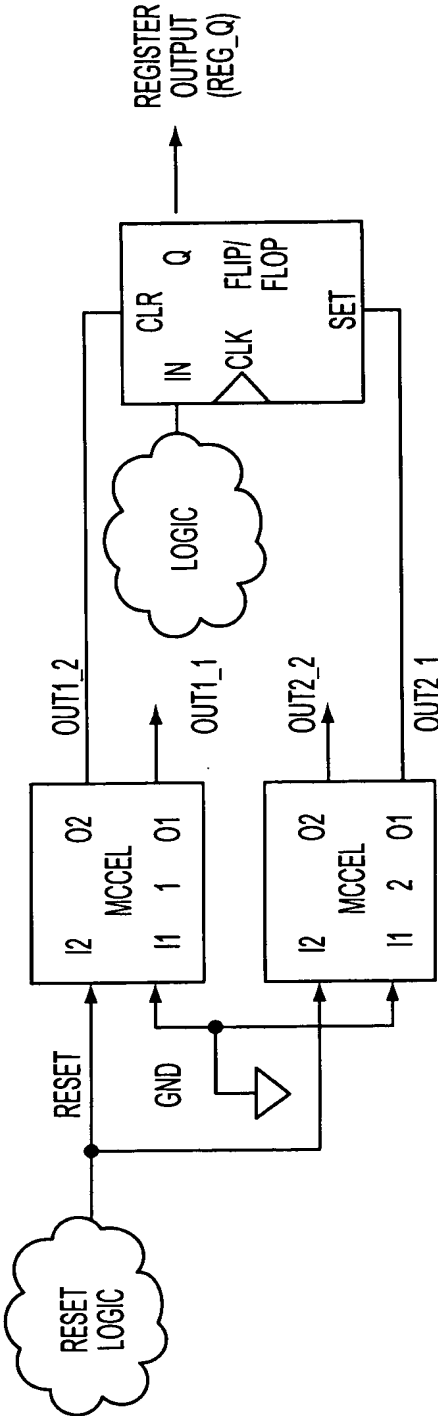


FIG. 32A

RESET	MCCEL1	MCCEL2	REG_Q
0	0	0	Q
0	0	1	Q
0	1	0	Q
0	1	1	Q
1	0	0	0
1	0	1	X
1	1	0	X
1	1	1	1

FIG. 32B

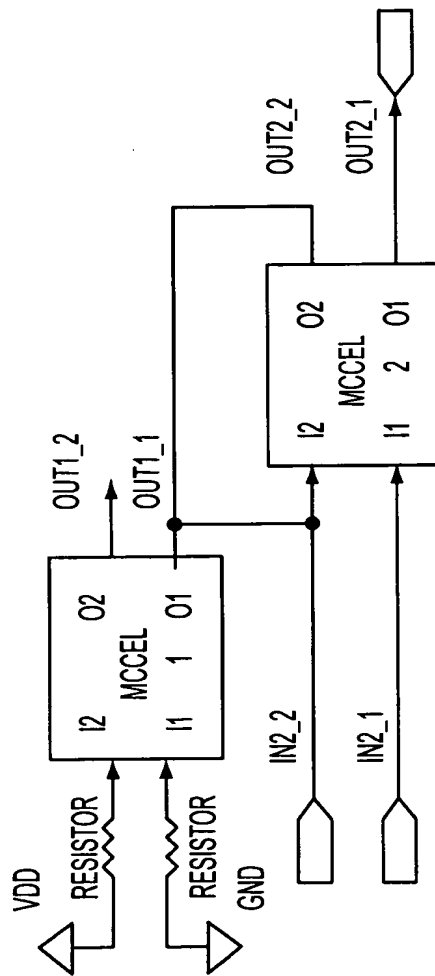
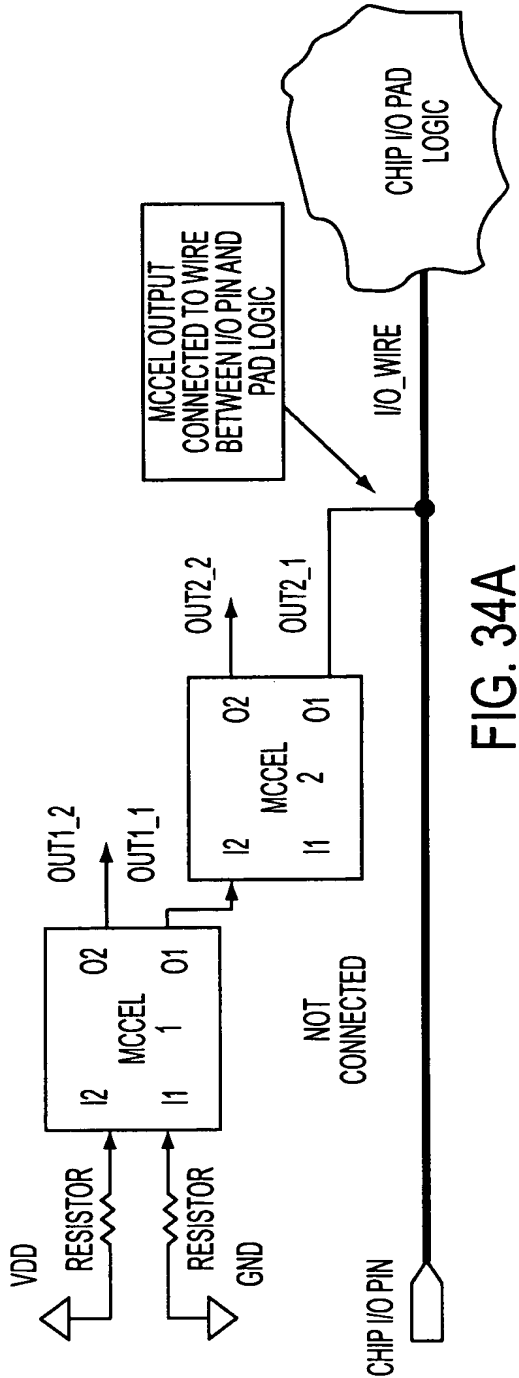


FIG. 33A

MCCEL1	MCCEL2	OUT2_1
0	0	IN2_1 (DEFAULT)
0	1	IN2_1 + IN2_2 + PULL-DOWN
1	0	IN2_1
1	1	IN2_1 + IN2_2 + PULL-UP

FIG. 33B



MCCEL1	MCCEL2	I/O_PIN
0	0	I/O_WIRE (DEFAULT)
0	1	I/O_WIRE + PULL-DOWN
1	0	I/O_WIRE
1	1	I/O_WIRE + PULL-UP

FIG. 34B

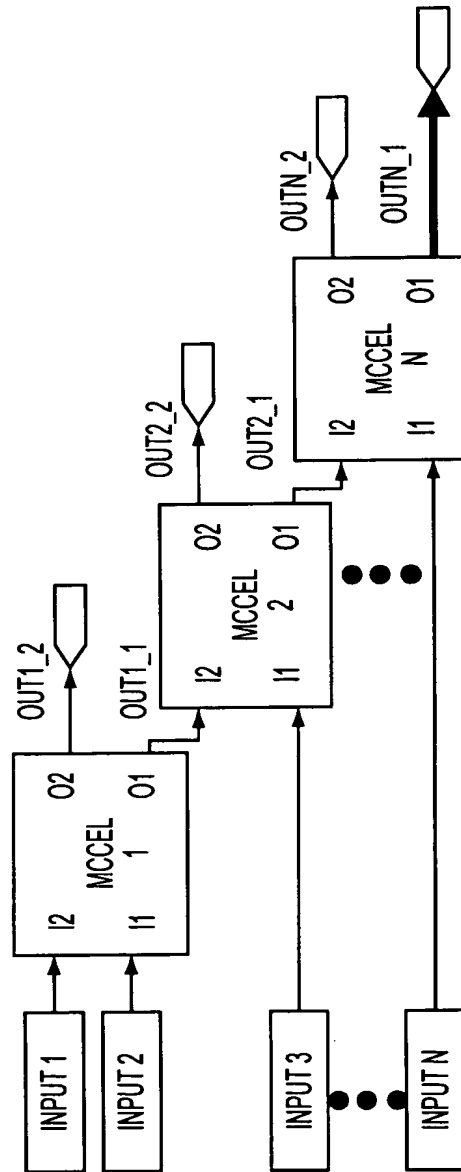


FIG. 35

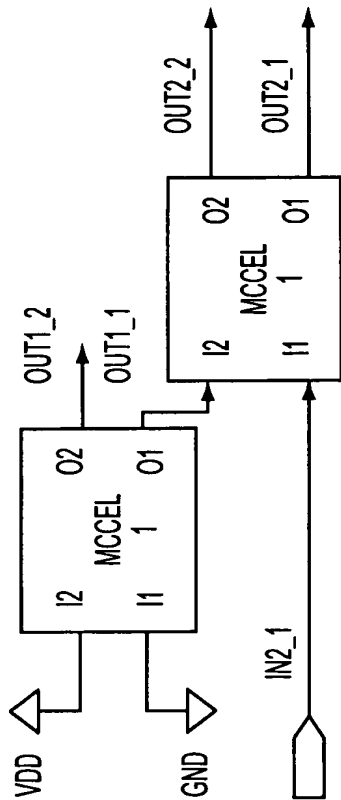


FIG. 36A

MCCEL1	MCCEL1	OUT2_1	OUT2_2
0	0	IN2_1 (DEFAULT)	0 (DEFAULT)
0	1	0	IN2_1
1	0	IN2_1	1
1	1	1	IN2_1

FIG. 36B

RESET	MCCEL1	REG Q
0	0	Q
0	1	Q
1	0	0
1	1	1

FIG. 37B